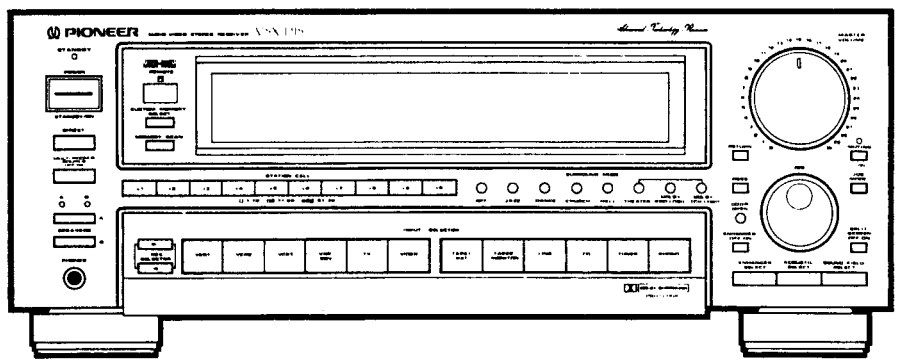
PIOB-01928

Operating Instructions

AUDIO/VIDEO STEREO RECEIVER

VSX-D1S



Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT NOTICE

[For U.S. and Canadian models]

The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

[For Canadian model]

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

RETURN function

This function returns the unit to a set of initial settings and ready to broadcast tuner. This is helpful during troubleshooting or when no sound is output. For details, refer to "FRONT PANEL FACILITIES," page 19.

RESET function

Use this function when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation switches are pressed. Press the RESET switch to return to normal operating conditions.
If you press this switch, the entire contents of the memory are cleared.

About the Demonstration Mode

- The demonstration is activated by turning on the power switch while holding down the MUTING switch (from power standby condition). The demonstration will appear on the display.
- Press any other switch to cancel the demonstration.

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The future of sound and vision.

19 28

IMPORTANT

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the appliance is operated.

RETAIN INSTRUCTIONS – The operating instrucions should be retained for future reference.

HEED WARNING – All warnings on the appliance and in the operating instructions should be adhered to.

FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.

WATER AND MOISTURE – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

LOCATION – The appliance should be installed in a stable location.

WALL OR CEILING MOUNTING – The appliance should not be mounted to a wall or ceiling.

VENTILATION – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

HEAT – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

POWER SOURCES – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

POWER-CORD PROTECTION – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

POLARIZATION – If your purchased product is provided with a polarized power plug, please read the following instructions. This product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

CLEANING – The appliance should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.

POWER LINES – An outdoor antenna should be located away from power lines.

NONUSE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

OBJECT AND LIQUID ENTRY – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

DAMAGE REQUIRING SERVICE – The appliance should be serviced by a Pioneer authorized service center or qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped; on the enclosure damaged.

SERVICING – The user should not attempt to service the appliance beyond that described in the operating instructions. For all other servicing, contact the nearest Pioneer authorized service center.

OUTDOOR ANTENNA GROUNDING – If an outside antenna is connected to the antenna terminal, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
In the U.S.A. section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.

CART – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

NEC — NATIONAL ELECTRIC CODE

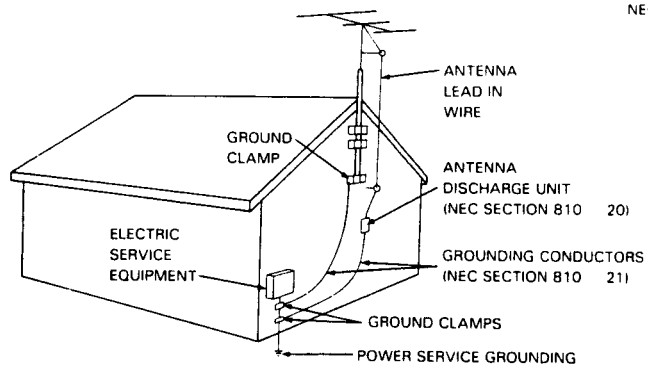

FIG A

Note to CATV system installer

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

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BEFORE OPERATING, ADJUST THE POSITION OF THESE SWITCHES

TWO VOLTAGE SELECTOR SWITCHES

Only multi-voltage models are provided with these switches. U.S., Canadian, European, U.K. and Australian models are not provided with these switches.

Mains voltages in Saudi Arabia are 127 V and 220 V only. Never use this model with 110 V setting in Saudi Arabia.

The line voltage selector switches are on the rear panel. Before your model is shipped from the factory, these switches are set to the power requirements of the destination. Check that they are set properly before plugging the power cord into the household wall socket. If the voltage is not properly set or if you move to an area where the voltage requirements differ, adjust the selector switches as follows.

1. Use a medium-size screwdriver.
2. First, insert a screwdriver in the groove of the voltage selector at the right, and adjust so that the tip of the groove points to the voltage value of your area.
3. Next, insert a screwdriver in the groove of the voltage selector at the left and adjust until the voltage is the same as at the right.

CHANNEL STEP/FM DE EMPHASIS SWITCH (Not available on U.S. and Canadian models)

The unit has been factory preset to the channel allocation and de-emphasis value for the area in which it is to be sold. If these values are set incorrectly, the frequency display may stop at the wrong frequency, or sound may be distorted, resulting in an inability to reproduce reception signals at their proper sound quality. For this reason, be sure to confirm that the values are set correctly before first using the unit.

[100kHz/10kHz/75μs] position:

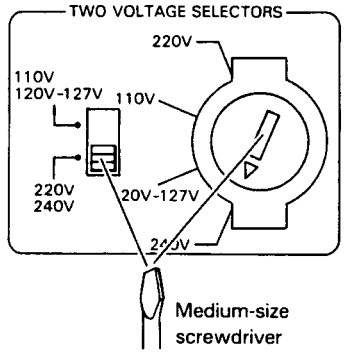
Set to this position for areas with an FM reception step of 100kHz, AM 10kHz, and de-emphasis 75μs.

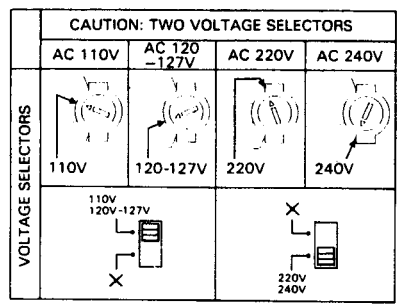
[50kHz/9kHz/50μs] position:

Set to this position, for areas with an FM reception step of 50kHz, AM 9kHz, and de-emphasis 50μs.

NOTE:

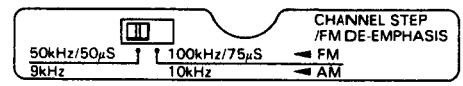
When unsure about the channel allocation and de-emphasis values for your area, consult your dealer for correct information.





NOTE:

Both switches must be in the same switch setting; otherwise, unit can be damaged.



FEATURES

- **DOLBY PRO LOGIC SURROUND performed by a Digital Signal Processor (DSP).**
- **DSP provides five Sound Field Control (SFC) simulated surround settings.**
- **Multi-Room & Source**

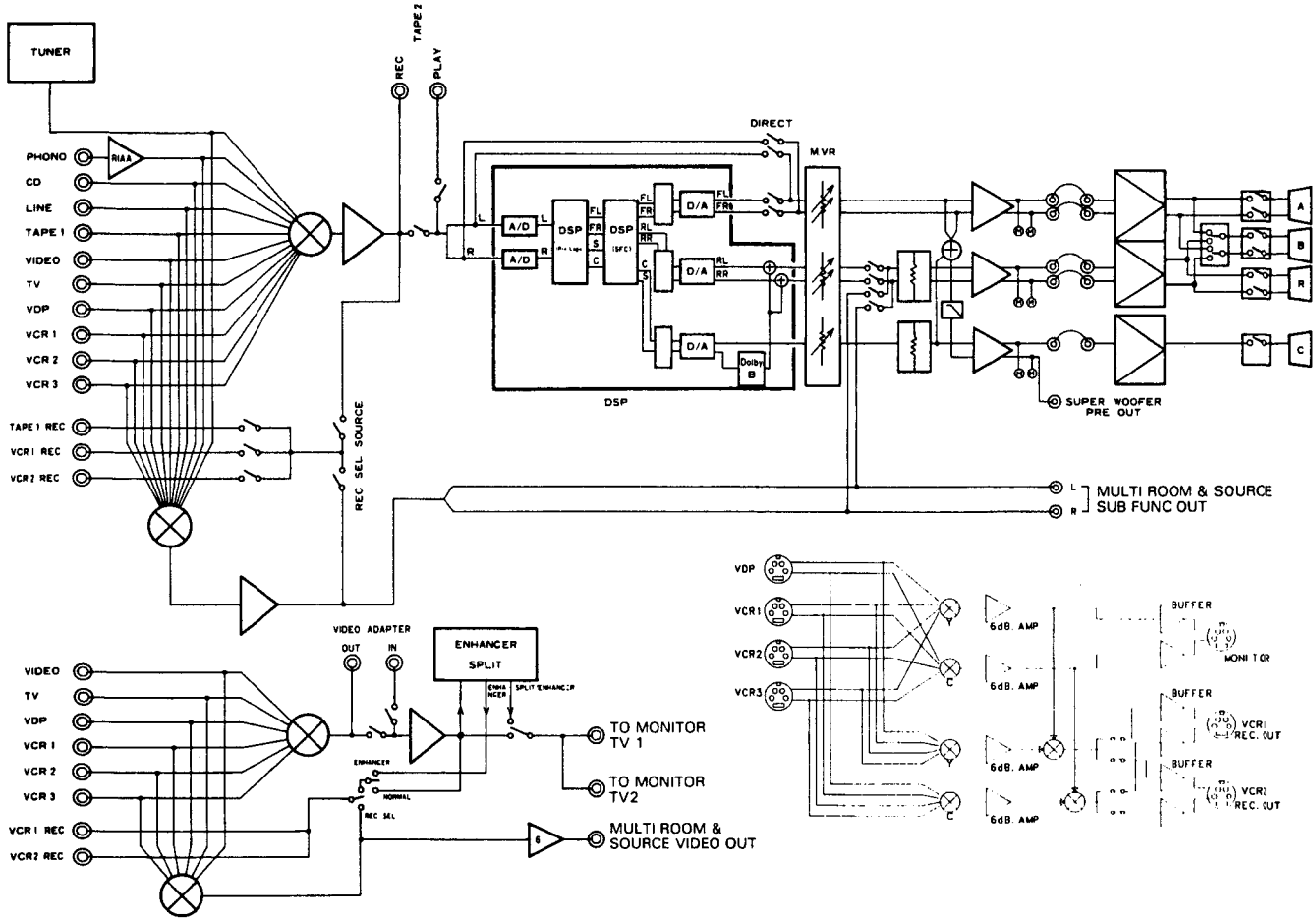
Using this unit in combination with the optional MR-100 Multi-Room System Remote Control Sensor Unit lets you enjoy different sources in different rooms at the same time.

- **Independent tone control of front, center, and rear channels is possible.**

You can make tone adjustments to front (L, R), center, and rear (L, R) channels independently, for much finer control over sound quality.

- **AM beat reduction**
- **Equipped with the JOG dial, designed for easier operation.**
- **Digital Simulated Stereo System (DSSS)**
- **Audio/Video programmable remote control unit.**

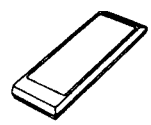
BLOCK DIAGRAM



ACCESSORY ITEMS

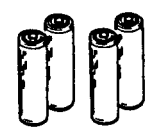
FM T-type Antenna

AM Loop Antenna



Audio/Video programmable remote control unit

Template x 2



Alkaline dry cell battery x4 (size "AAA" (LR03/AM-4)

DSSS (Digital Simulated Stereo System)

Special DSP circuitry gives you simulated stereo sound from monaural sources.
This operates even when a monaural signal is input into both the left and right channels, or only one of the channels. When a signal is input into only one channel, the output level is lower than when the signal is input into both the left and right channels.
You can also enjoy combining it with surround modes other than DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC.

SURROUND MODE

This unit is equipped with DOLBY PRO LOGIC SURROUND. There's also a DSP (Digital Signal Processor), with a choice of five SFC (Sound Field Control) simulated surround settings.

- **JAZZ:**

This gives you the sound field of a jazz club.

- **DANCE:**

A "hot" high-energy sound, with extra reverb for greater ambience.

- **CHURCH:**

The sound field of a church, ideal for reproducing the rich sound of a pipe organ.

- **HALL:**

You can enjoy a convincing hall sound.

- **THEATER:**

These effects are ideal when you want to enjoy stereo movie soundtrack sources that don't bear the DOLBY SURROUND mark.

With video software bearing the DOLBY SURROUND mark, switch DOLBY PRO LOGIC SURROUND and THEATER on. This will give you the sound field realism and movement of Dolby Surround together with the ambience and excitement of a movie theater.

• DOLBY PRO LOGIC SURROUND

Choose this setting for movies and music (especially Video Discs and video tapes bearing the DOLBY SURROUND mark) playback. DOLBY PRO LOGIC SURROUND continuously detects the size and direction of the dominant signal and cancels undesirable crosstalk, thereby providing signal emphasis.
It makes you clearly perceive the directions where music comes from. Real flow of sound also can be re-created naturally using this feature. You can feel as if being in the outstanding and expansive sound field. When using DOLBY PRO LOGIC SURROUND, a delay time setting of 20 ms is commonly used. Use a different setting if you prefer.

• DOLBY 3 CH LOGIC

By adding the signal for the rear speakers to the signal for the front speakers, the front three channels (front L, front R, and CENTER) provide a much wider, more spacious sound field than possible during ordinary stereo playback.

DOLBY PRO LOGIC SURROUND and DOLBY 3 CH LOGIC are equipped with the following 3 positions for the CENTER MODE.

When using center speaker(s):

- **NORMAL**

Low range frequencies, which have little effect on directionality and positioning, are routed to the left and right front speakers. So you can use relatively small size speakers as the center speakers.

- **WIDE**

If you use large size center speaker(s), choose this setting. The full frequency range of the center speakers, from low to high, is routed to the center speaker.

When not using a center speaker:

- **PHANTOM**

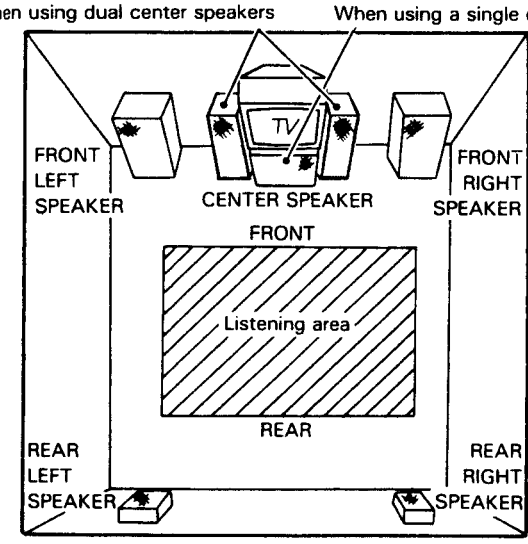
The signal which would have been sent to the center speaker is divided equally between the left and right front speakers.

SURROUND SPEAKER INSTALLATION EXAMPLE

To get the best effect out of the surround system, place the speakers as shown below.

An example for center speaker location

When using dual center speakers When using a single center speaker



NOTE:

- *To avoid interference with the picture on a nearby TV set, use magnetically shielded speaker systems. This is particularly important for the center speaker since it is usually located closest to the TV.*
- *Position the left and right channel speakers at equal distances from the TV set and approximately six feet from each other.*
- *Position the center speaker above, below, or behind the TV set. Sound may not appear to coincide with the picture if you position it next to the TV set.*
- *Rear speakers are best positioned slightly above ear level.*

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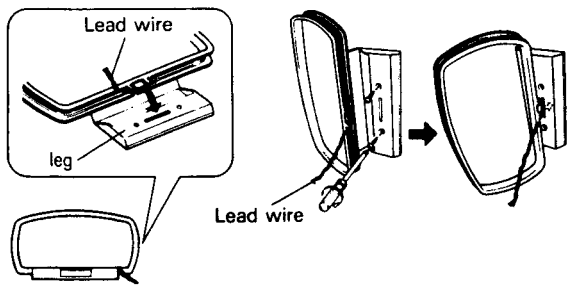
Note:
Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.
When using Dolby Surround, turn off the TAPE 2 switch or set the graphic equalizer for flat response or to its "through (defeat)" (or off) setting, if it has one.

CONNECTION CHART (1)

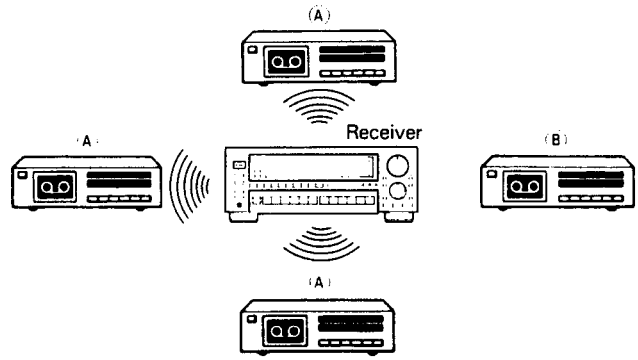
• Illustration shows U.S. and Canadian models.

Setting Up the AM Antenna

- Insert the claw on the bottom of the antenna into the groove in the leg.
- Place the antenna on a level surface and rotate it to locate the orientation that yields the best reception.
- Use the attachment hole in the leg to screw to wall or other location, then insert the claw on the bottom of the antenna into the groove in the leg (fixing the antenna in the direction that gives the best reception).

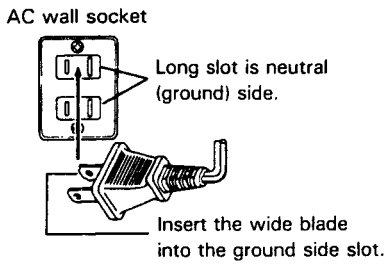


Precaution regarding installation position of cassette deck.
If the cassette deck is installed in the Ⓐ positions shown in the drawing below, it may be adversely affected during playback. If possible, it's better to install it in the Ⓑ position.



CONNECTING THE POWER CORD (For U.S. and Canadian models)

Household electrical outlets are provided with specific polarity, a live side and a neutral (ground) side. This unit utilizes such polarity in order to improve sound quality. As shown in the illustration, be sure to insert the power plug so that its blades match the width of slots in the outlet.



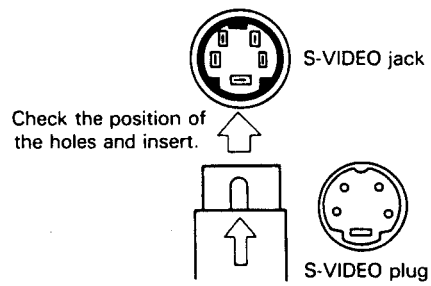
THE S-VIDEO CONNECTORS

When using a VCR 1, VCR 2, VCR 3, VDP/CDV and monitor TV which has S-VIDEO connectors, they can be connected to the S-VIDEO connectors.
For the operation of components connected to S-VIDEO connectors, refer to the instruction manuals of the corresponding components.

NOTE:

- *In this unit, the S-VIDEO connectors (Y-C separate) and the regular pin jacks are independent, so any signal input through a pin jack must be output from the pin jack, and any signal input through an S-VIDEO connector must be output through the S-VIDEO connector.*
- *The S-VIDEO connector is for video portion only, so be sure to make audio connections also.*

How to use S-VIDEO connectors

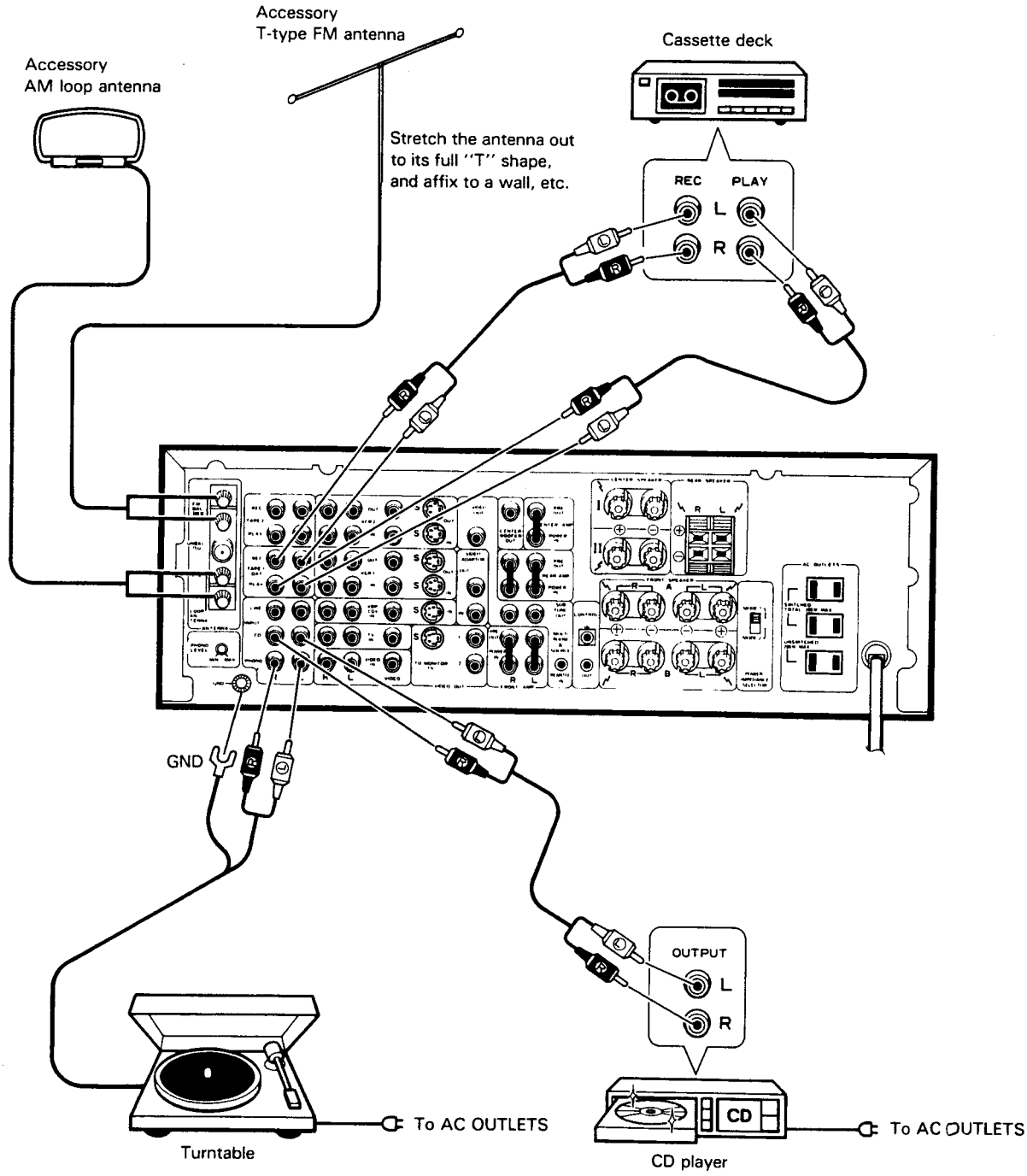


For the method of switching the monitor TV S-VIDEO connector/VIDEO jack, refer to the monitor TV's instruction manual.

CONNECTION CHART (1)

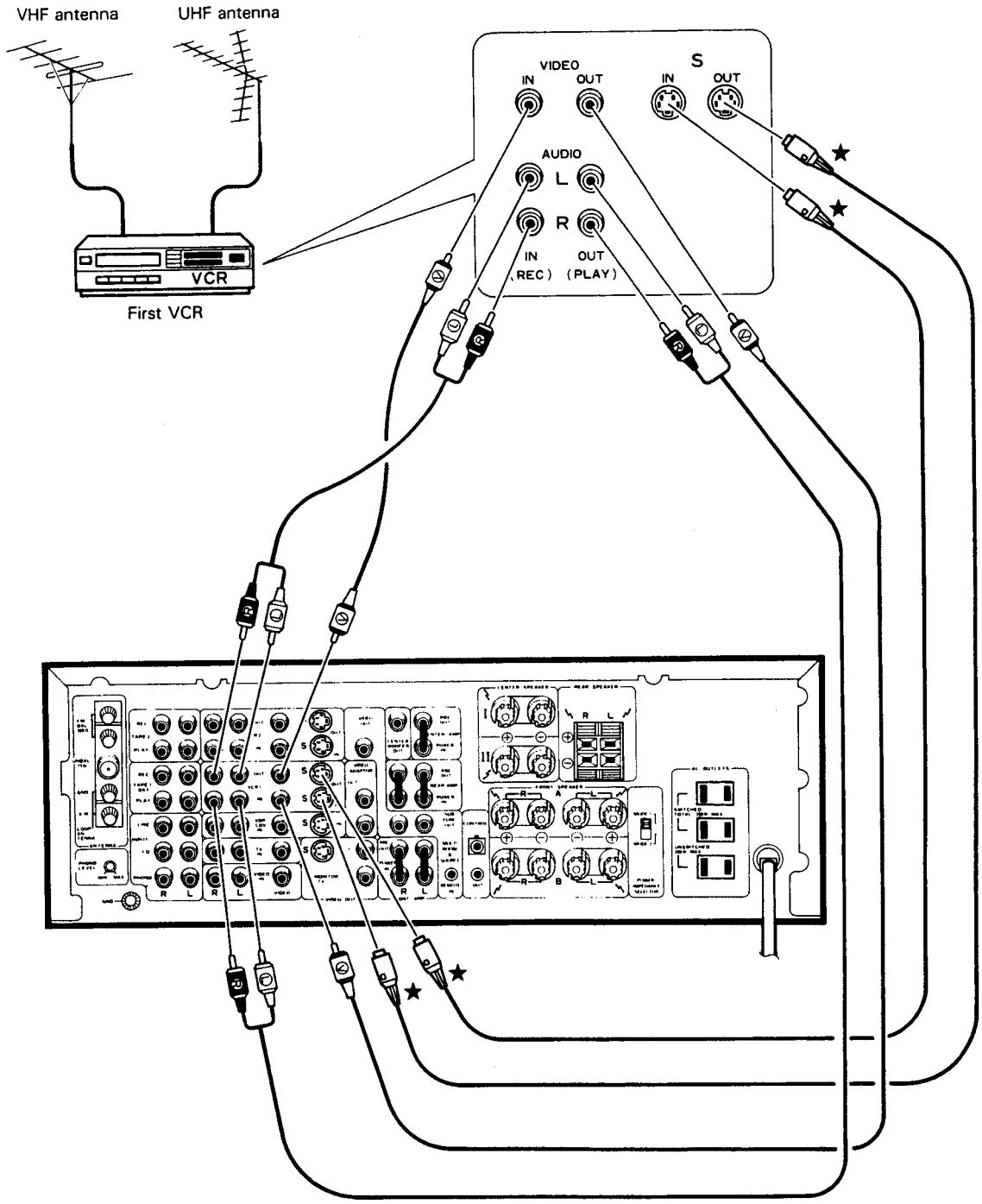
Basic Audio Component Connections

- FM, AM antenna connection
- Turntable
- First cassette deck
- Compact disc player



Basic Video Component Connections (1)

• First VCR

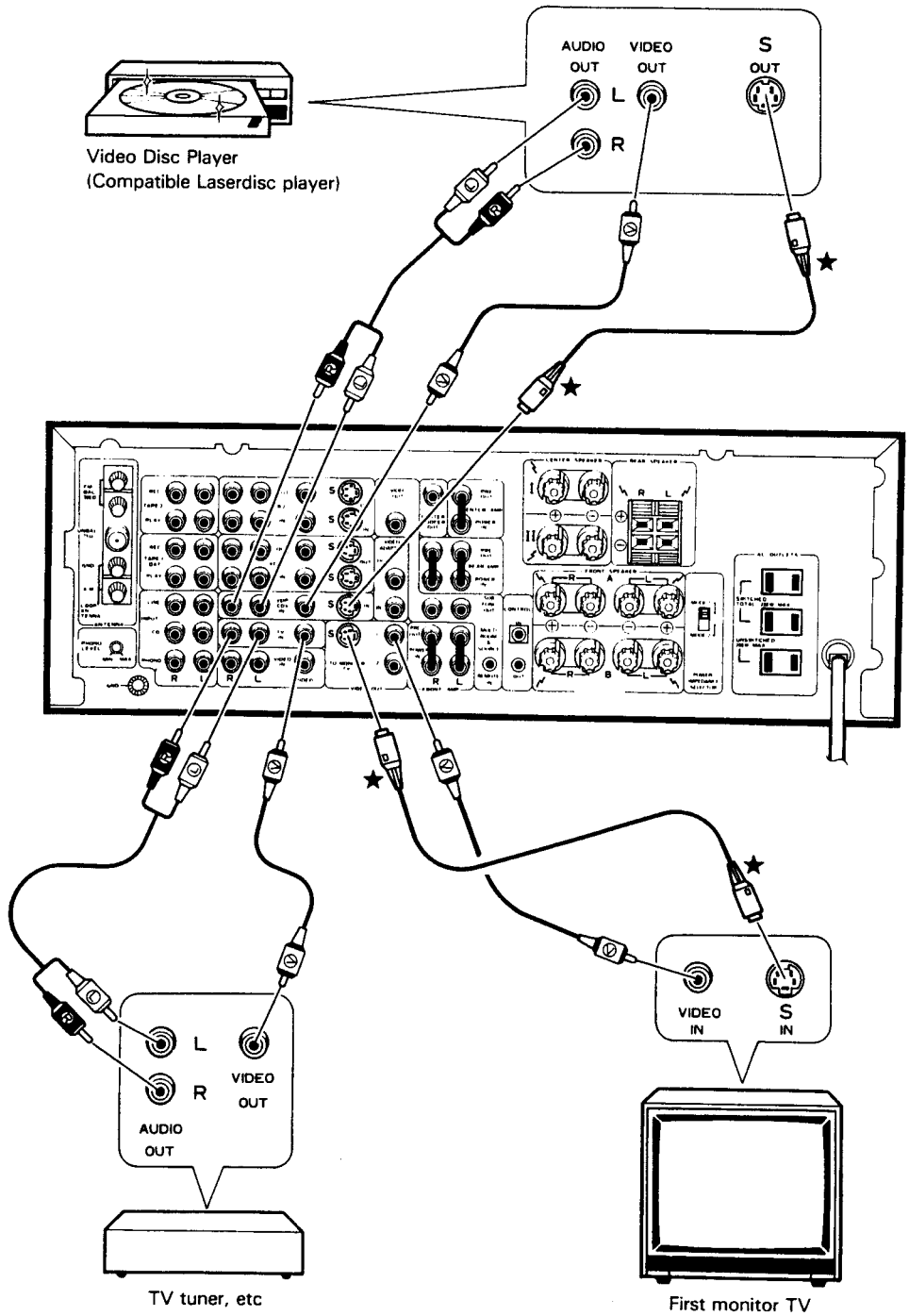


★ S (video) connection. See page 7.

CONNECTION CHART (1)

Basic Video Component Connections (2)

- Video Disc Player (Compatible Laserdisc player)
- TV tuner
- First monitor TV

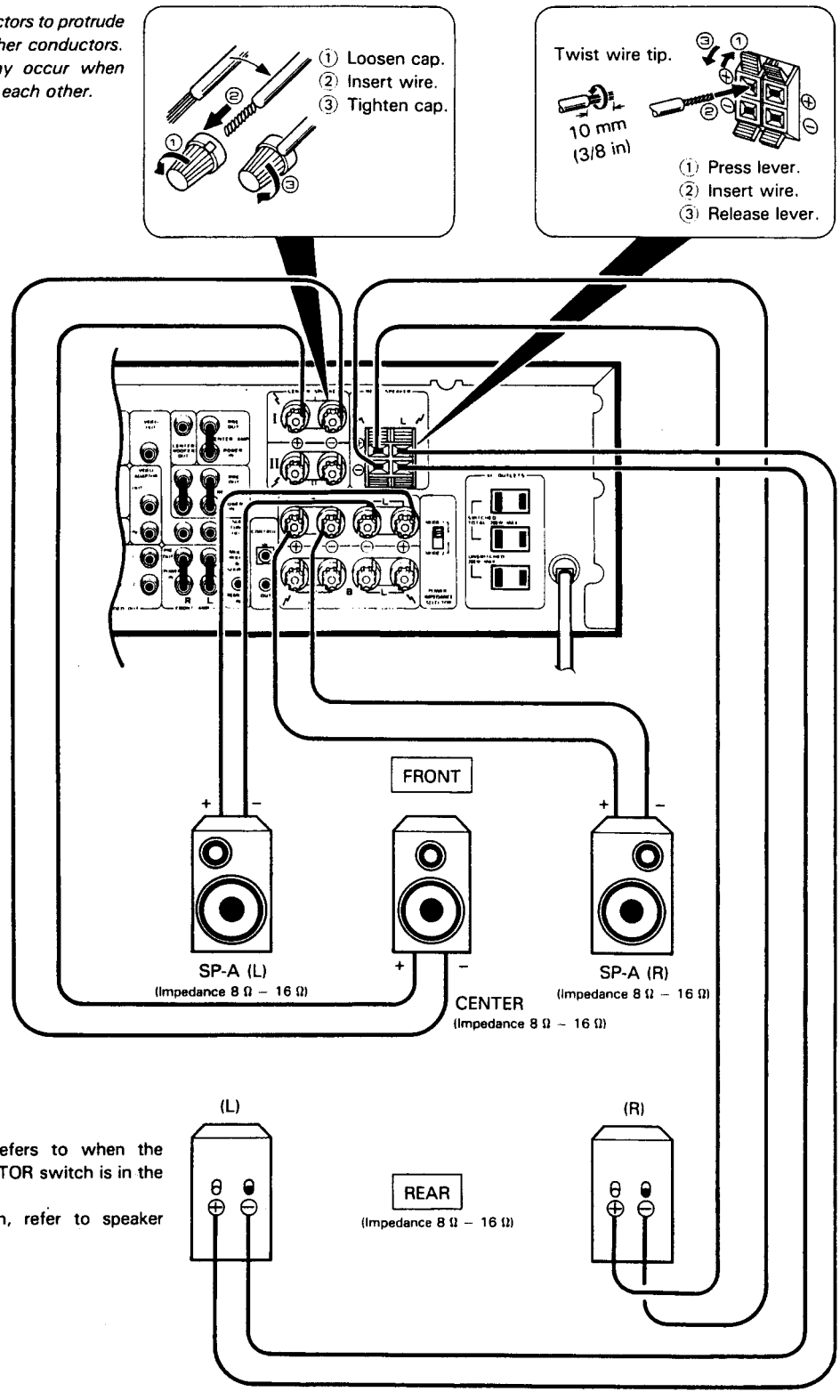


★ S (video) connection. See page 7.

Speakers Connection (1)

For details concerning speakers impedance, refer to page 26.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.



* Speaker impedance here refers to when the POWER/IMPEDANCE SELECTOR switch is in the "MODE 1" position.
In the "MODE 2" position, refer to speaker impedance on page 26.

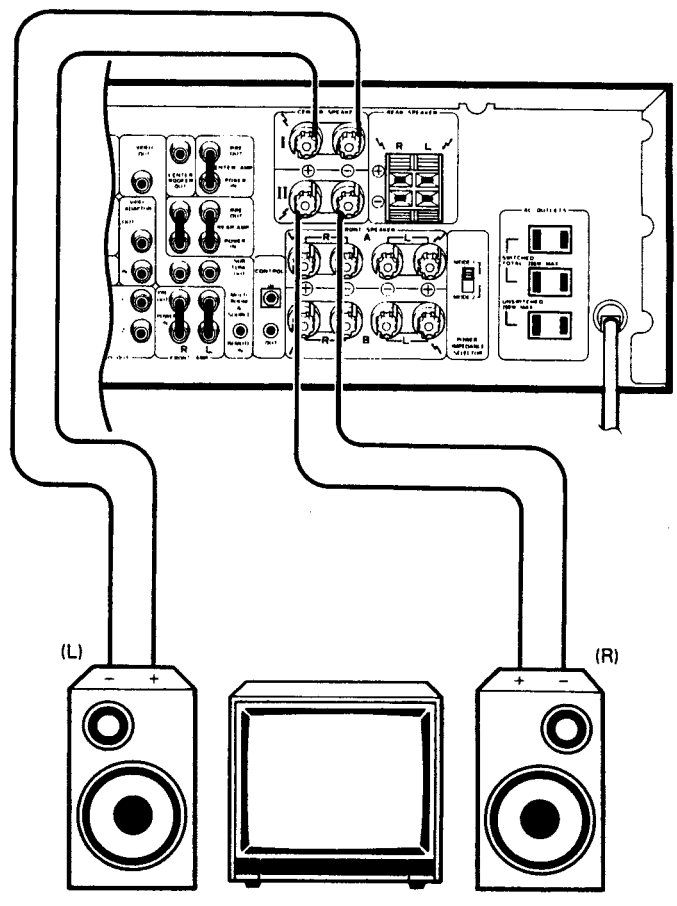
Speakers Connection (2)

For details concerning speakers impedance, refer to page 26.

Connecting Two Speakers for Dual Center

There are two terminals for center speakers on the receiver, so you can connect two speakers. When you can't install a speaker under or behind your TV, installing speakers either side of the TV as a center speaker is just as effective.

If you install speakers near a TV, use magnetically shielded speakers.



(Impedance 16 Ω) (Impedance 16 Ω)

* Speaker impedance here refers to when the POWER/IMPEDANCE SELECTOR switch is in the "MODE 1" position.
In the "MODE 2" position, refer to speaker impedance on page 26.

CONNECTION CHART (2)

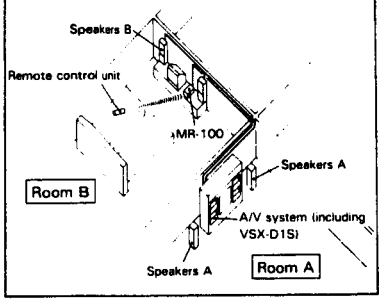
• Illustration shows U.S. and Canadian models.

Connecting Multi-Room and Source

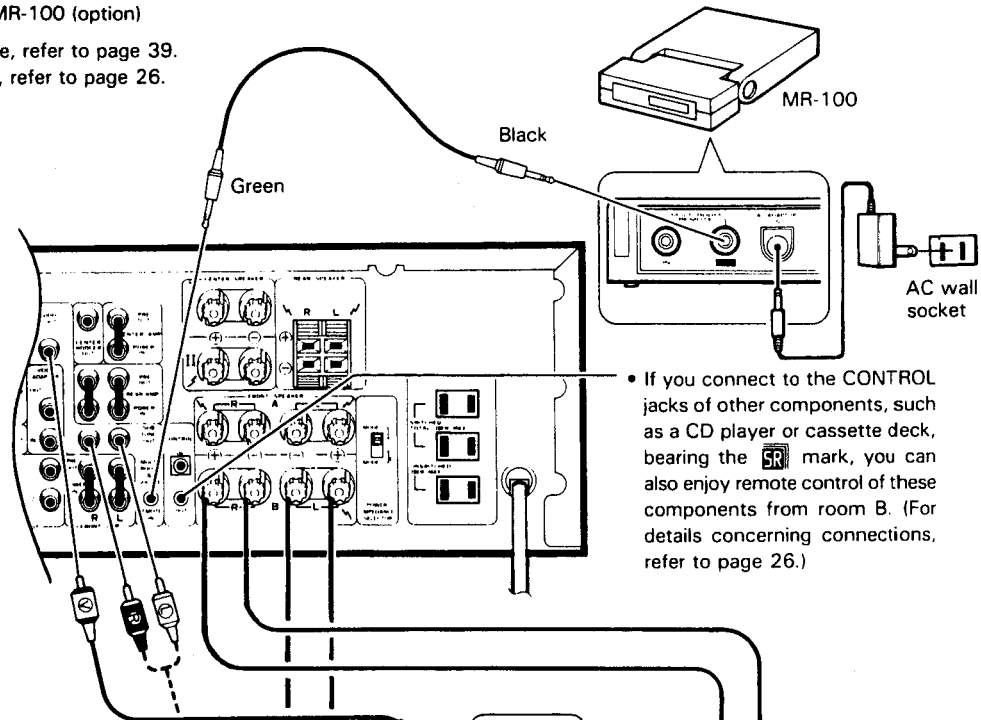
- Monitor TV
- Speakers
- Multi-Room remote control sensor unit MR-100 (option)

For details concerning Multi-Room & Source, refer to page 39.
For details concerning speakers impedance, refer to page 26.

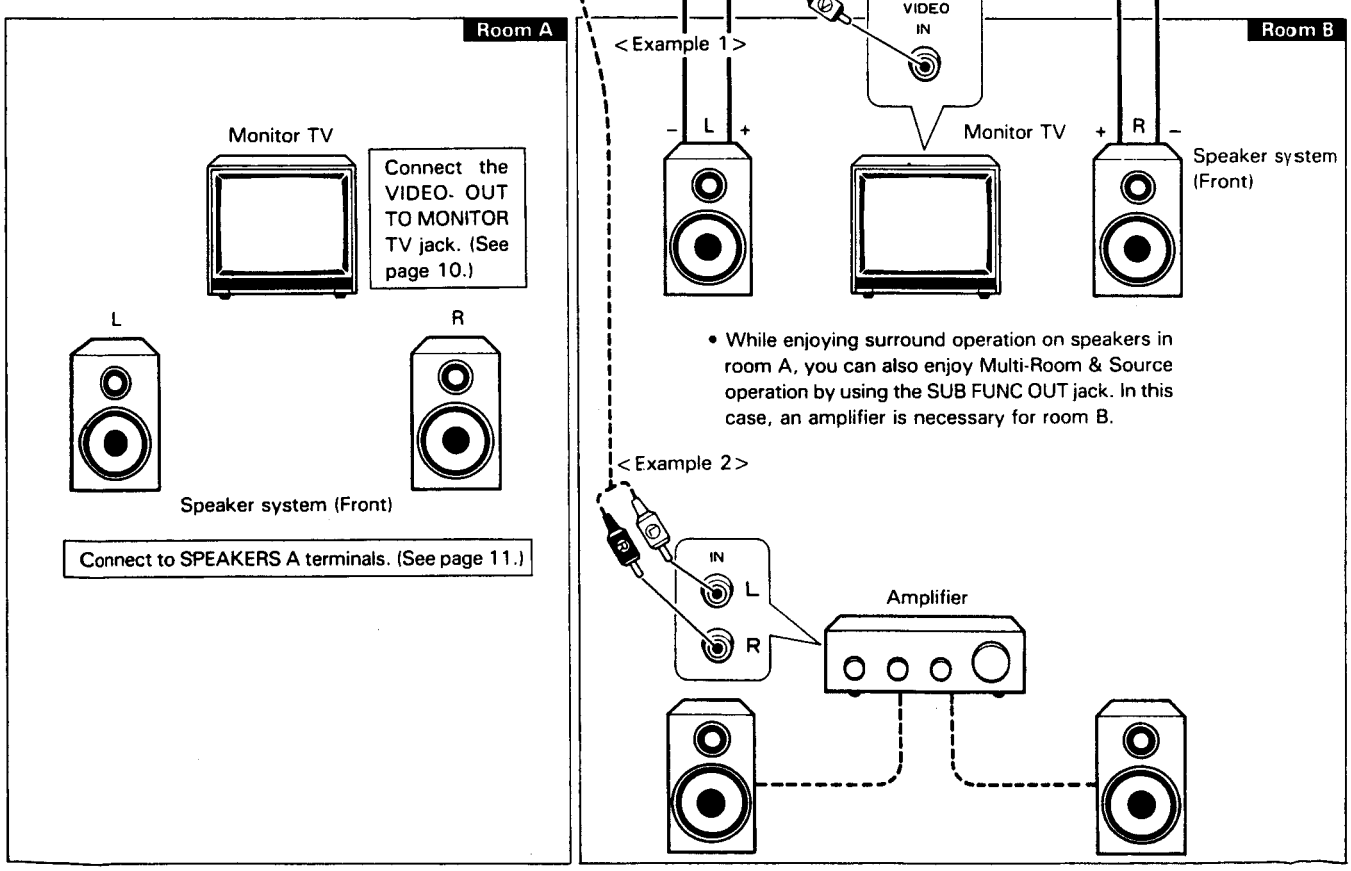
Set up example



NOTE:
Be careful not to make the wrong connections for CONTROL IN/OUT (black) and MULTI-ROOM REMOTE IN (green).



• If you connect to the CONTROL jacks of other components, such as a CD player or cassette deck, bearing the SR mark, you can also enjoy remote control of these components from room B. (For details concerning connections, refer to page 26.)


Room A
Monitor TV
Connect the VIDEO- OUT TO MONITOR TV jack. (See page 10.)
L
R
Speaker system (Front)
Connect to SPEAKERS A terminals. (See page 11.)
<Example 1>
VIDEO IN
Monitor TV
Room B
– L +
+ R –
Speaker system (Front)
• While enjoying surround operation on speakers in room A, you can also enjoy Multi-Room & Source operation by using the SUB FUNC OUT jack. In this case, an amplifier is necessary for room B.
<Example 2>
IN
L
R
Amplifier

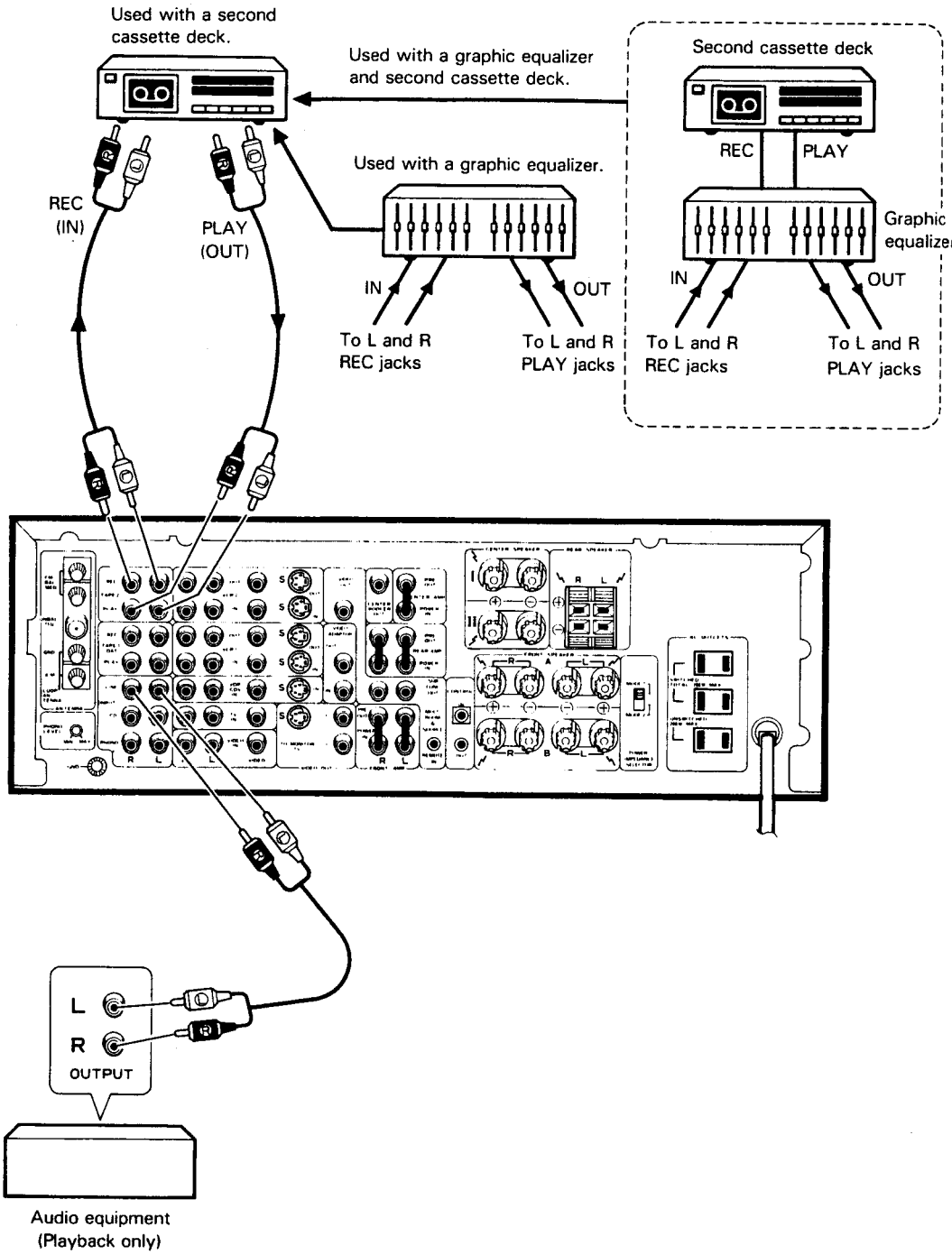
CONNECTION CHART (2)

Additional Audio Components

- Second cassette deck (Graphic equalizer)
- Audio equipment (Second CD player, etc.)

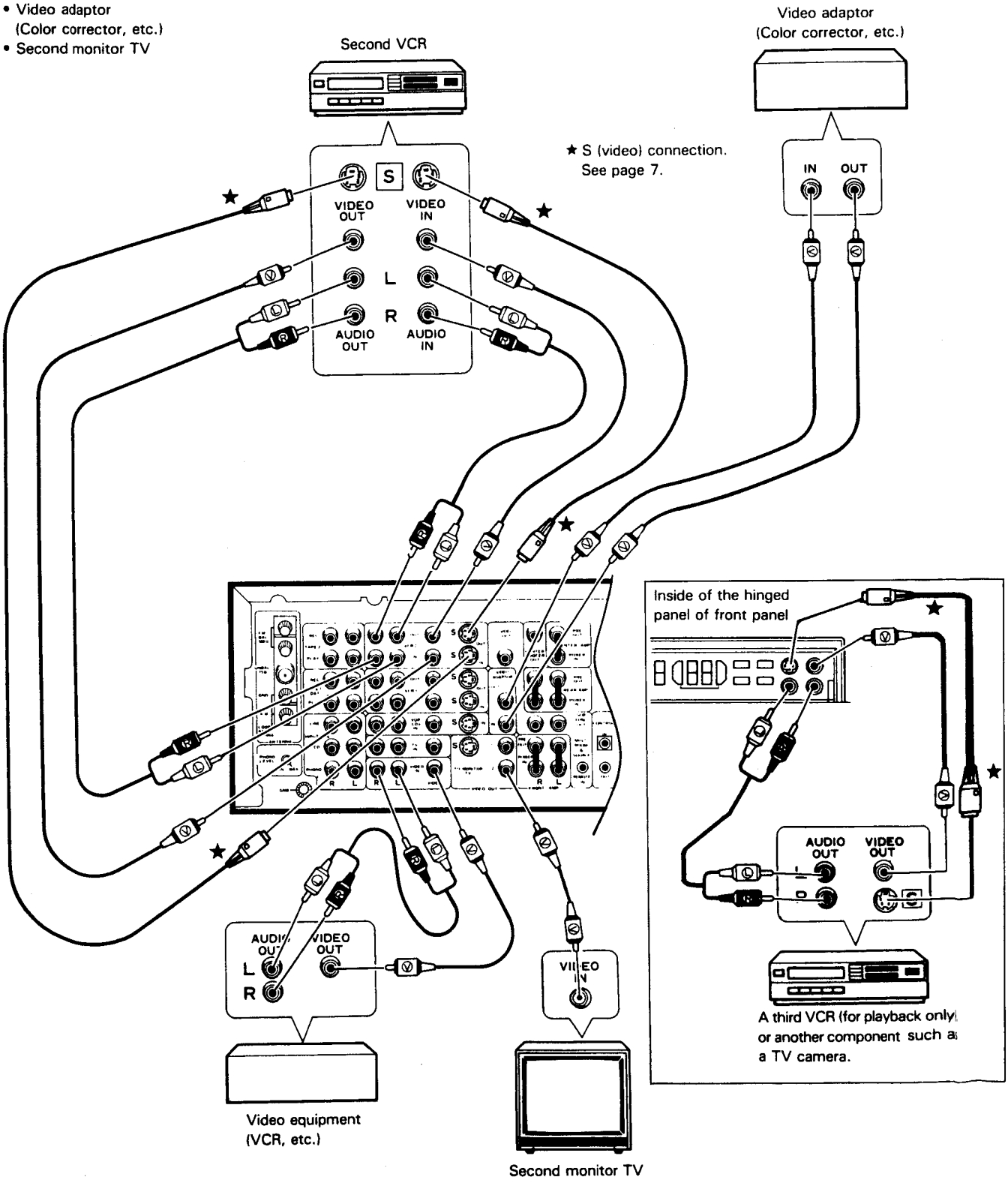
NOTE:

- *Dolby Surround will not operate correctly if the signal passes through a graphic equalizer.*
  When using Dolby Surround, turn off the TAPE 2 MONITOR switch or set the graphic equalizer for flat response or to its through (defeat) setting.
- *Sound from TAPE 2 cannot be recorded on VCR 1, 2, or TAPE 1.*



Additional Video Components

- Second VCR
- Video equipment (Second LD player, etc.)
- Video adaptor (Color corrector, etc.)
- Second monitor TV



CONNECTION CHART (2)

When used with another amplifier (power amplifier, pre-amplifier) [FRONT]

(a)
When using the pre-amplifier of the receiver and using a separate stereo power amplifier to increase power.
(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.

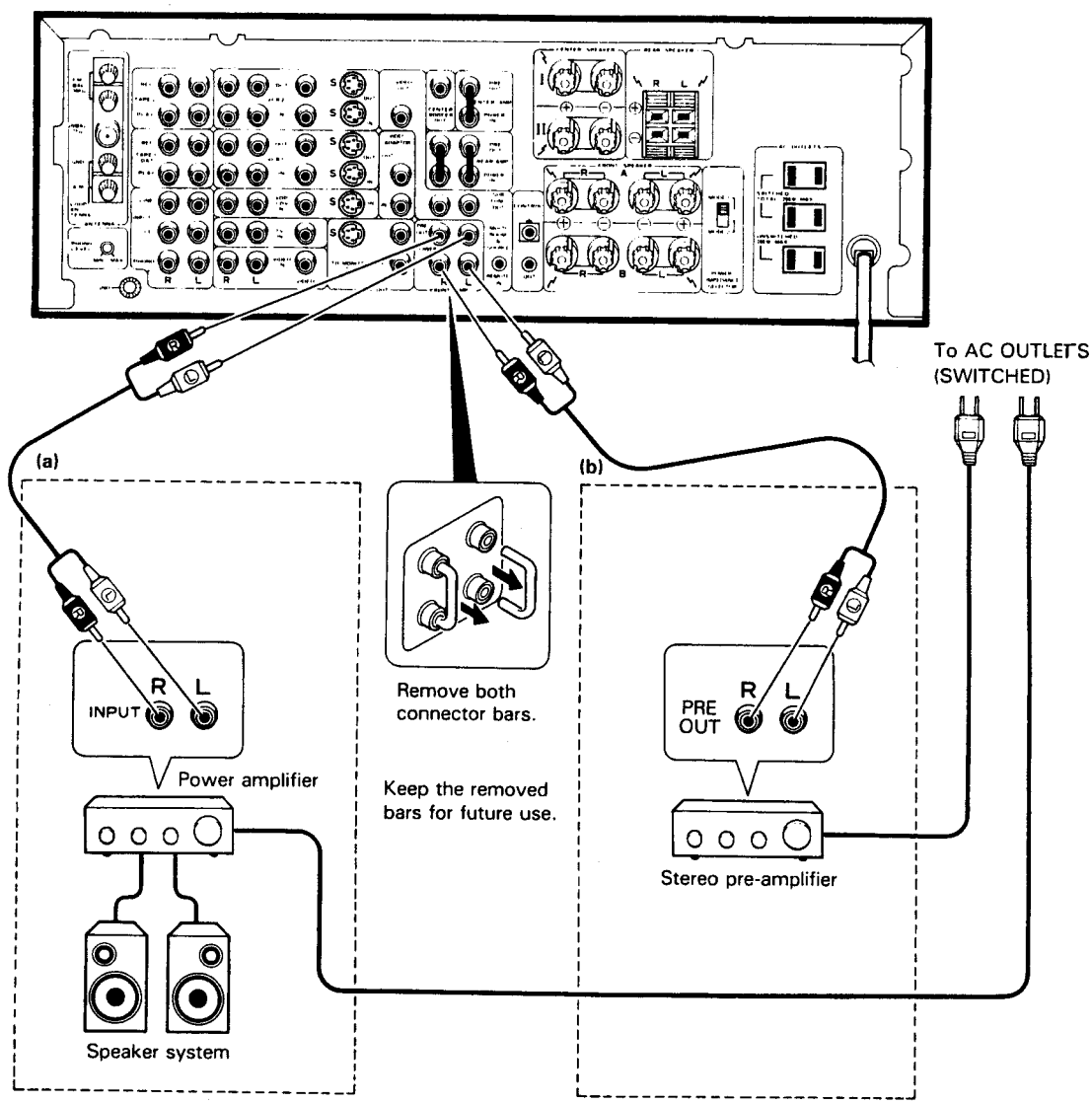
Caution for use of AC OUTLETS:
Components which have electrical power consumption greater than that indicated on the rear panel of this unit cannot be connected. Please take necessary precaution.

When using PRE AMP OUT jack:
Use these jacks when using a separate amplifier as the power source instead of this units, and listening to speakers which are connected to the separate amplifier.

NOTE:
Sound from the speaker channels (front, center, rear) from which the connector bars have been removed in order to make a connection cannot be heard if the speakers are connected to the unit.

When using POWER AMP IN jacks:
Use these jacks when this unit is being used as the power amplifier for the surround channels (front, center, rear).
With separate surround processing components, each corresponding channel (front, center, rear) which has a sound output should be connected correspondingly.

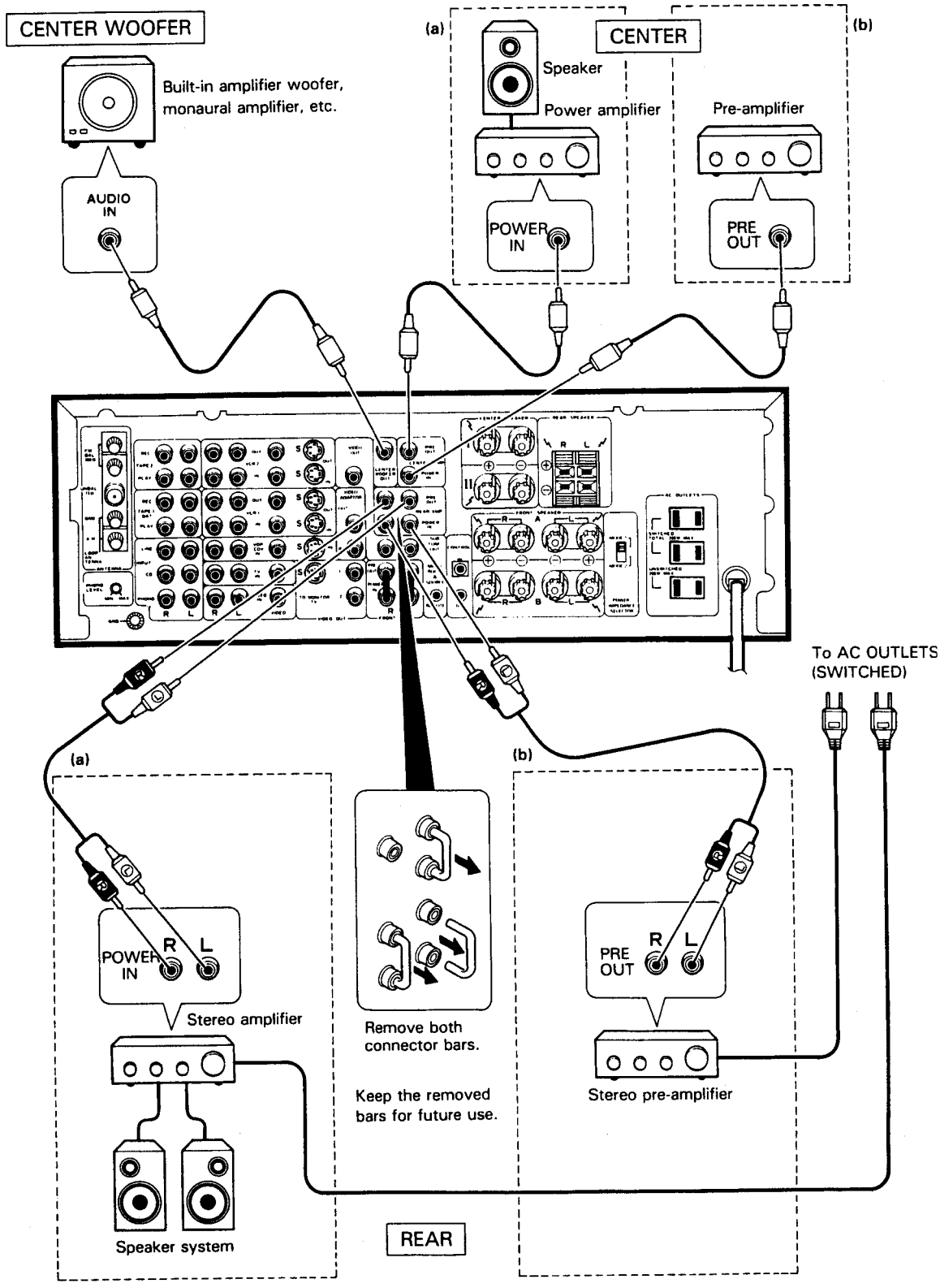
NOTE:
When the connector bars are removed to make connections, sound from all channels of separate components connected to this unit's input terminals, as well as broadcasts received by the unit become unable to be heard via speakers connected to the unit.



[REAR and CENTER]

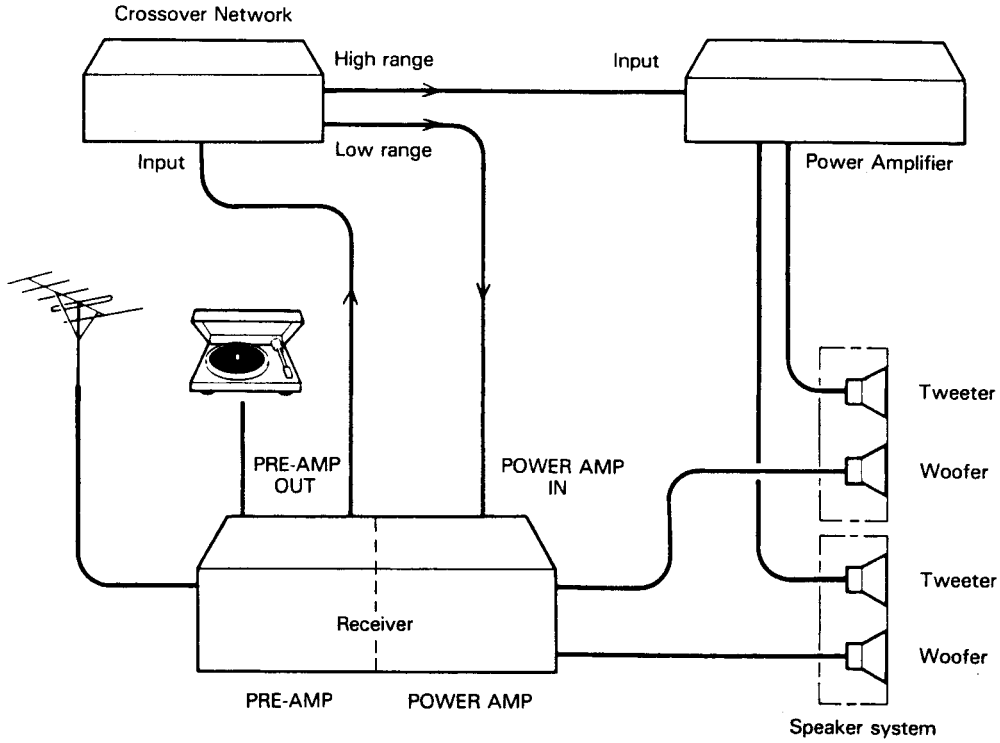
(a)
When using the pre-amplifier of the receiver and using a separate stereo power amplifier to increase power.

(b)
When using the power amplifier of the receiver and using a separate stereo preamplifier.



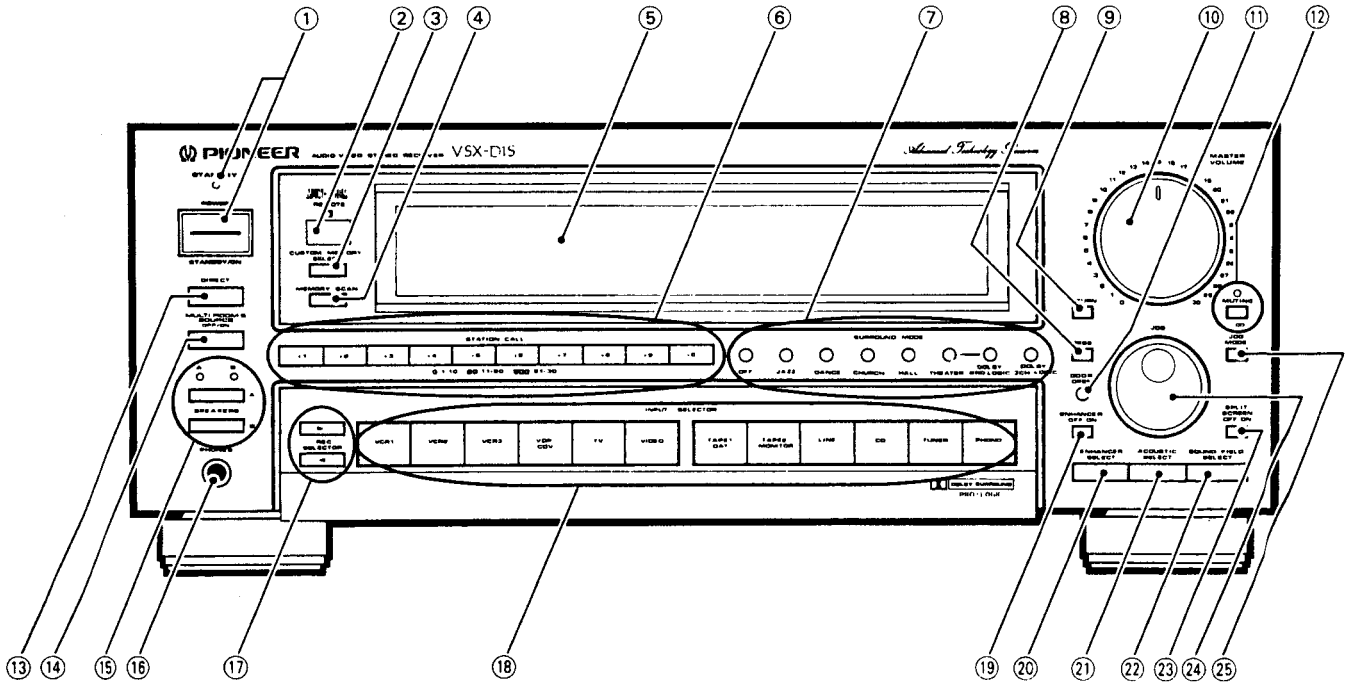
CONNECTION CHART (2)

Application example- MULTI-AMPLIFIER SYSTEM



FRONT PANEL FACILITIES

FRONT PANEL FACILITIES



① POWER STANDBY/ON switch/indicator

This is the switch for electric power.

ON ..... When set to the ON position, power is supplied and the unit becomes operational.

STANDBY .. When set to STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The STANDBY indicator lights when the power is STANDBY, and goes out during ON.

② Remote sensor window

③ CUSTOM MEMORY SELECT switch

Recall a genre name with this switch.

④ MEMORY SCAN switch

Operates when the INPUT SELECTOR is set to TUNER. Station frequencies assigned to the STATION CALL switches are tuned in, one after another, beginning with the current station no., for approximately 5 seconds each. The display section SCAN indicator will light. Press the switch again and the tuner remains tuned in to the station playing when the switch was pressed the second time.

Station frequencies not assigned station numbers in the memory are skipped.

When you have selected a CUSTOM MEMORY genre, memory scan is performed on the stations in that genre.

⑤ Display section (see page 23)

⑥ STATION CALL (RANDOM 30 CH) switches

- These switches are used to preset and recall desired broadcasting stations, "AUTO/MONO" switch setting.

Station call operation example:

If you press the [*2] key:

- One time – station 2 is selected.
- Two times – station 12 is selected.
- Three times – station 22 is selected.

NOTE:

Pressing the STATION CALL switches when a component other than TUNER is selected causes the INPUT SELECTOR setting to switch to TUNER.

- They are also used when performing direct access tuning.

⑦ SURROUND MODE switches (See page 6)

⑧ DSSS (Digital Simulated Stereo System) switch

Operate this when inputting a monaural signal to enjoy a simulated stereo sound. You can use it when a monaural signal is input into both the left and right channels or when a monaural signal is input into only one of the channels.

⑨ RETURN switch

Pressing this switch returns the receiver to the following settings, the sound level being controlled by MASTER VOLUME control knob.

• TAPE 2 MONITOR	OFF
• SURROUND MODE	OFF
• SPEAKERS A	ON
• MUTING	OFF
• BALANCE	CENTER
• INPUT SELECTOR	TUNER
• STATION CALL	1 CH *
• VIDEO ADAPTOR	OFF

* When a station is not memorized in 1 CH, station search will automatically proceed from the frequency displayed.

⑩ MASTER VOLUME control

Use to adjust the sound volume from the front, center and rear speakers. When you adjust volume by remote control, the indicator above the knob flashes.

When the MULTI ROOM & SOURCE switch is ON, volume level in room B cannot be adjusted with this knob. Adjust the volume by remote control.

⑪ DOOR OPEN switch

Use to open the hinged panel door.

⑫ MUTING switch/indicator

Press to temporarily cut off the sound volume. The indicator will flash. When pressed again, the sound will return to its previous level.

⑬ DIRECT switch

Press this to listen to source sound without passing the audio signal through sound quality or balance adjusting circuitry.
The surround mode, center mono, and rear and center speakers are automatically switched off.

⑭ MULTI ROOM & SOURCE switch

Use in combination with the separately sold MR-100 Multi-Room remote control unit.
When this switch is on, the REC SELECTOR switch operates as a sub-function selector. The selected sub-function's sound is output through SPEAKERS B, and the video signal is output through the MULTI-ROOM & SOURCE VIDEO OUT jack. If you install speaker systems connected to the SPEAKERS B terminals in a different room, you can enjoy different sources in two different rooms with a single main unit.

⑮ SPEAKERS A, B switches/indicators

These are ON/OFF switches for the speaker systems. Indicators light when the speakers are ON.

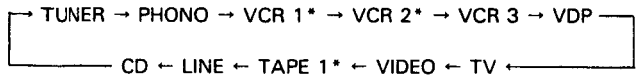
⑯ PHONES jack

Connect the plug on your headphones to this jack. To only hear through the headphones, set all SPEAKERS A and B switches to the OFF position.

NOTE:
There are no ON/OFF switches for the rear and center speakers, so when you want to listen only on headphones, switch surround OFF. If you want to listen with surround ON, reduce rear and center volume levels.

⑰ REC SELECTOR switches

You can select the component to be recorded on TAPE 1, VCR 1, VCR 2 without using with the INPUT SELECTOR. Press a REC SELECTOR switch and REC SEL lights in the display section, showing the same component selected with the INPUT SELECTOR.
Each time you press the "►" switch, the components change in the following order.



Press the "◄" switch and they change in the opposite order. When the REC SELECTOR has been through all the components once, REC SELECTOR switches off. REC SELECTOR also switches off if the "◄" and "►" switches are pressed at the same time.

* You can record audio and video in the following ways.
From TAPE 1 on VCR 1 and 2, from VCR 1 on VCR 2 and TAPE 1, and from VCR 2 on VCR 1 and TAPE 1.
Do not select the component you wish to record on (for example, VCR 1), with the REC SELECTOR.

⑱ INPUT SELECTOR switches

• **Video input selector**
VCR 1: Press when performing playback on a first VCR unit.
VCR 2: Press when performing playback on a second VCR unit.
VCR 3: Press when performing playback on a third VCR unit.
VDP/CDV: Press when performing playback on a video disc player (VDP) or Compatible Laserdisc player.
TV: Press to watch TV broadcasts from the TV tuner connected to the rear panel TV IN jacks.
VIDEO: Press when performing playback on a VCR connected to VIDEO IN jack.

• **Audio input selector**
TAPE 1/DAT: Press when performing playback on a DAT or cassette deck.
TAPE 2 MONITOR: Press when performing playback on a second cassette deck.
LINE: Press when performing playback on an audio component connected to the LINE IN jacks.
CD: Press when playing compact discs on a CD player.
TUNER: Press when listening to radio broadcasts.
PHONO: Press when playing records on a turntable.

NOTE:
- *You cannot use these switches when the hinged panel door is open, so use the FUNCTION switch ❻ (page 21) to change the input selector selection.*
- *Because of the digital processing performed by this unit's Digital Signal Processor, high level input may result in distortion. This is particularly true when using a turntable with a high output cartridge. In this case, adjust the volume level with the PHONO LEVEL control on the rear panel so that it is the same as other inputs.*

⑲ ENHANCER OFF/ON

Use to switch the video enhancer effect ON/OFF during playback or recording of a video.
When it is switched ON, adjust the degree of effect with the JOG dial ㉔.
If you turn ON the SPLIT SCREEN OFF/ON switch ㉓, the right half of the screen shows a picture with the enhancer ON, and the left half of the screen shows a picture with the enhancer OFF.
The enhancer has no effect on S jack video signals.

⑳ ENHANCER SELECT switch

Use this to store a desired enhancer effect in memory, and to recall a desired enhancer effect. For further details concerning memory operation, refer to page 37.
When the enhancer has been memorized, then the enhancer will be automatically switched ON when this switch is pressed.

㉑ ACOUSTIC SELECT switch

Use this to store desired sound quality settings in memory. Also use it to recall memorized sound quality settings from memory. For further details concerning memory operation, refer to page 36.

㉒ SOUND FIELD SELECT switch

Use to store a desired sound field in memory. Also use to recall a desired sound field from memory. For further details concerning memory operation refer to page 37.

㉓ SPLIT SCREEN OFF/ON switch

If you turn the ENHANCER OFF/ON switch ON to add the video enhancer effect, and then turn this switch on, the right side of the picture will have the enhancer effect added, and the left side will be without the enhancer effect. A split screen picture can not be output through the VCR REC jacks. A picture with the enhancer ON is output.
The split screen has no effect on S jack video signals.

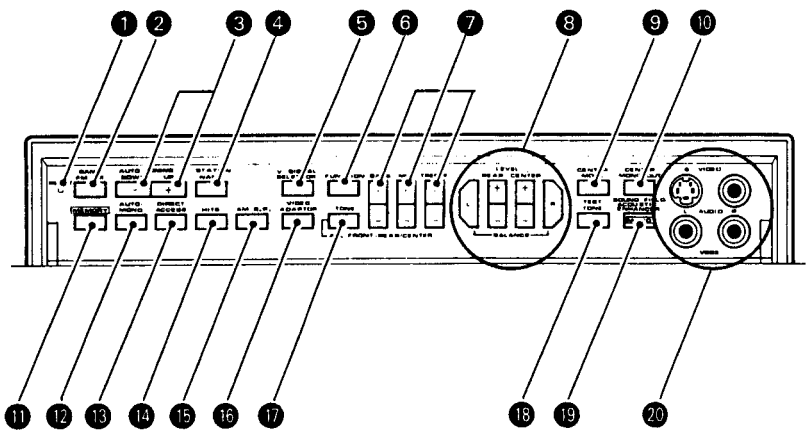
㉔ JOG dial

This lets you control the following six functions.
(1) AM B.R. (AM beat reduction) adjustment.
(2) Tuner frequency (manual tuning)
(3) Selection of letters for station naming.
(4) Video enhancer effect level adjustment.
(5) Surround's delay time selection.
(6) Surround's total effect level adjustment.
You can select which function you want to control with the JOG MODE switch ㉕, but the mode automatically switches when a function changes. For example, if the AM B.R. switch is ON, the JOG MODE automatically switches to enable control of AM B.R.

㉕ JOG MODE switch

Use this to select the mode you want to control with the JOG dial ㉔. The selected mode is indicated by the box in the display section. The lit line under the mode display indicates which mode can be selected.

[INSIDE OF THE HINGED PANEL]



❶ RESET switch

Use this when normal operation becomes impossible because of external influences such as static electricity or lightning, or when operation is impossible even when operation switches are pressed. Press this switch to return to normal operating conditions.
If you press this switch when the power is ON, the unit switches to POWER STANDBY, and the entire contents of the memory are erased.

❷ BAND switch (FM/AM)

Use this to switch between FM and AM frequency band reception.

❸ AUTO TUNING switches (DOWN (–), UP (+))

+: Performs tuning in ascending frequency order.
–: Performs tuning in descending frequency order.

❹ STATION NAME switch

This switch is used when inputting station names. (see page 30.)

❺ V (Video) SIGNAL SELECTOR switch

Press this to switch VIDEO OUT (TO MONITOR TV) and VCR VIDEO OUT in the following sequence: (Audio doesn't change)
The recording selector has priority for VCR video recording.

VCR 1 → VCR 2 → VCR 3 → VDP → TV → VIDEO → OFF

☐ Indications light in the display section.
There is no picture when it is OFF.

❻ FUNCTION switch

This changes the INPUT SELECTOR selection in sequence. When the hinged panel door is open, the INPUT SELECTOR switches can not be used, so use this switch instead.

❼ Tone control switches

BASS:
Use to adjust the low-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the BASS control are pressed simultaneously, the base response will be set to the flat (normal) condition.

MID:
Use to adjust the middle-frequency level. Press the + switch to increase middle-frequency level, and the – switch to decrease it.
When both sides (+, –) of the MID control are pressed simultaneously, the middle response will be set to the flat (normal) condition.

TREBLE:
Use to adjust the high-frequency level. Press the + switch to increase low-frequency level, and the – switch to decrease it.
When both sides (+, –) of the TREBLE control are pressed simultaneously, the treble response will be set to the flat (normal) condition.
Adjust TONE CONTROL settings are indicated in the display section (in several seconds).

⑧ BALANCE and LEVEL switches

BALANCE:
Use to adjust the sound volume balance between left and right speakers.
L: Press to decrease the sound on the right side.
R: Press to decrease the sound on the left side.
Press L and R together to bring the volume balance back to standard (Left = Right).
REAR:
Operate only when the surround mode is on.
Use these switches to adjust the sound level between the front and rear speakers.
After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.
– : Surround rear speaker volume is reduced.
+ : Surround rear speaker volume is increased.
Pressing + and – together will restore front and rear to the standard balance setting.
CENTER:
Use these switches to adjust the center speaker sound level to the level of the front speakers.
Operate only when DOLBY PRO LOGIC SURROUND or DOLBY 3CH LOGIC mode is on.
After adjustment, use the MASTER VOLUME control to adjust the overall sound to a suitable level.
– : Lowers the center speaker sound level.
+ : Raises the center speaker sound level.
Pressing – and + at the same time returns you to the standard.
Adjusted BALANCE and LEVEL settings are indicated in the display section (in several seconds).

⑨ CENTER MODE switch

Use this to switch between DOLBY PRO LOGIC SURROUND and the DOLBY 3CH LOGIC center modes (NORMAL, WIDE, PHANTOM). The selected mode is indicated by the CENTER MODE indicators in the display section.

⑩ CENTER MONO OUT switch

When the Surround is off, this switches the output from the center speakers ON/OFF.
If MONO is lit in the CENTER MODE indicators in the display section, front left and right monaural sound is output through the center speakers.

⑪ MEMORY switch

Pressing this switch will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode. This switch is also used to input station names (see page 30), and custom memory operation.

⑫ AUTO/MONO switch

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator in the display section is lit.
Auto stereo mode:
Normally, leave in this mode for reception. When a stereo broadcast is received, it will be automatically reproduced in stereo.
During stereo broadcast reception, the STEREO indicator in the display section lights.
Monaural mode:
When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.
NOTE:
This switch has no effect on reception of AM broadcasts.

⑬ DIRECT ACCESS switch

When this switch is pressed, the STATION CALL switches function as ten-key number switches for direct input of the desired reception frequency.
When frequencies that cannot be received are entered, the entered frequency value flashes, before reception of the previous frequency resumes.

⑭ HITS (Hyper Intelligent Tuning System) switch

- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.
- If the HITS switch is pressed during STATION NAME input (see page 30), the receiver performs a memory search in order of ascending station number for memorized stations whose names begin with the same letter as the station just input.
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

NOTE:
- *The system searches for stations within successive 1MHz ranges for FM and 100 kHz ranges for AM. During DIRECT ACCESS tuning, it searches up and down for a station until it reaches the edges of the band. If no receivable station is found within the band range, the receiver returns to the state it was in before the HITS switch was pressed.*
- *If the upper (or lower) frequency limit of the receiver is encountered during HITS operation, the receiver stops searching in that direction but continues to search in the other.*

⑮ AM B.R. (Beat Reduction) switch

This switches AM beat reduction ON/OFF.
You can switch it ON during AM broadcast reception.
Switch it ON and the AM B.R. indicator lights in the display section.
Adjust the level of beat reduction with the JOG dial ㉔. (Turn the JOG dial until you reach the frequency you want to remove).

⑯ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the rear panel VIDEO ADAPTOR jacks. An indicator on the display section lights up when this switch is set to ON. This has no effect on an S output jack signal.

⑰ TONE switch

Use this to switch between the channels (ALL/FRONT/REAR/CENTER) you want to control with the tone control switches. See page 36.

⑱ TEST TONE switch

You can use this when surround mode is ON.
[When using DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC]
This switches the TEST TONE passes from the front left → center → front right → rear (L, R) (DOLBY PRO LOGIC) in that order, and can be heard for approximately 2 seconds from each speaker.
[When using other surround modes]
This switches the TEST TONE passes from the front left → center → front right → rear right → rear left in that order, and can be heard for approximately 2 seconds from each speaker.

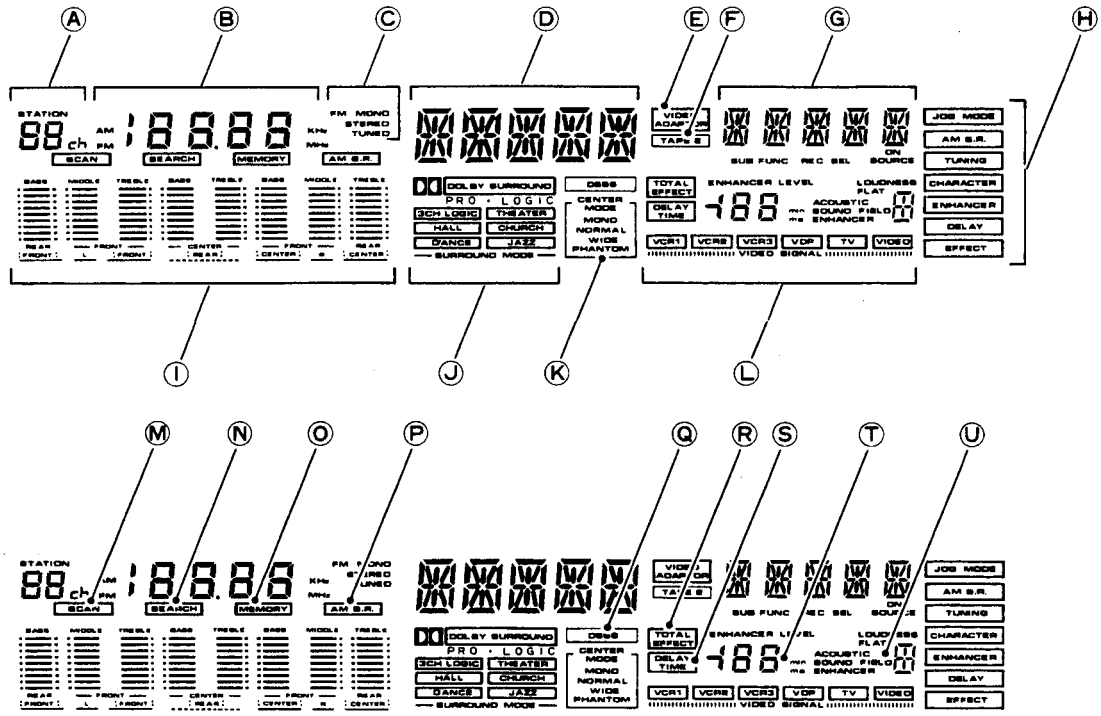
⑲ MEMO switch (SOUND FIELD/ACOUSTIC/ENHANCER)

Use to operate sound field memory, acoustic memory, and enhancer memory.
Sound field memory : See page 37.
Acoustic memory : See page 36.
Enhancer memory : See page 37.

⑳ VCR 3 INPUT jacks

Video components such as a VCR or TV camera, etc. can be connected here.

[DISPLAY SECTION]



Ⓐ STATION display
Shows the channel selected with the STATION CALL switch.

Ⓑ Frequency display

Ⓒ Tuning indicators

FM MONO: This lights when you select MONO with the AUTO/MONO switch. When this indicator is lit, reception of FM stereo broadcasts is also monaural.

STEREO: When the FM MONO indicator is out (auto stereo mode), this lights when receiving an FM stereo broadcast.

TUNED: Lights when a station is tuned.

Ⓓ Function & Station name display

Ⓔ VIDEO ADAPTOR indicator
Lights when the VIDEO ADAPTOR switch is in the ON position.

Ⓕ TAPE 2 indicator
Lights when the TAPE 2 MONITOR switch is in the ON position.

Ⓖ SUB FUNC & REC SEL display

- When you aren't using the REC SELECTOR, "SOURCE" lights, and the function output from the REC OUT jacks is displayed. Switch REC SELECTOR ON and the function selected with the REC SELECTOR switch is displayed.
- When the MULTI ROOM & SOURCE OFF/ON switch is ON, the component selected as the sub function is displayed (SUB FUNC indicator lights).
- CUSTOM MEMORY name is displayed.

Ⓗ JOG MODE indicators
The lit mode indicates the function that can be operated with the JOG dial at present.
▭ indicates the present selected mode.
Modes that can be selected are displayed underlined.

Ⓘ Tone/Level/Balance meters

Ⓙ SURROUND MODE indicators
These display the selected surround mode. When all indicators are out, surround is OFF.

Ⓚ CENTER MODE indicators
These display the center mode (NORMAL, WIDE, PHANTOM) during DOLBY PRO LOGIC SURROUND and DOLBY 3CH LOGIC operation. When surround is OFF, they indicate when monaural sound is output from the center channel (MONO).

Ⓛ VIDEO SIGNAL indicators
Shows the video components selected.

Ⓜ SCAN indicator
Lights during memory scan operation.

Ⓝ SEARCH indicator
Lights during HITS operation.

Ⓞ MEMORY indicator
Lights during station call switch memory operation.

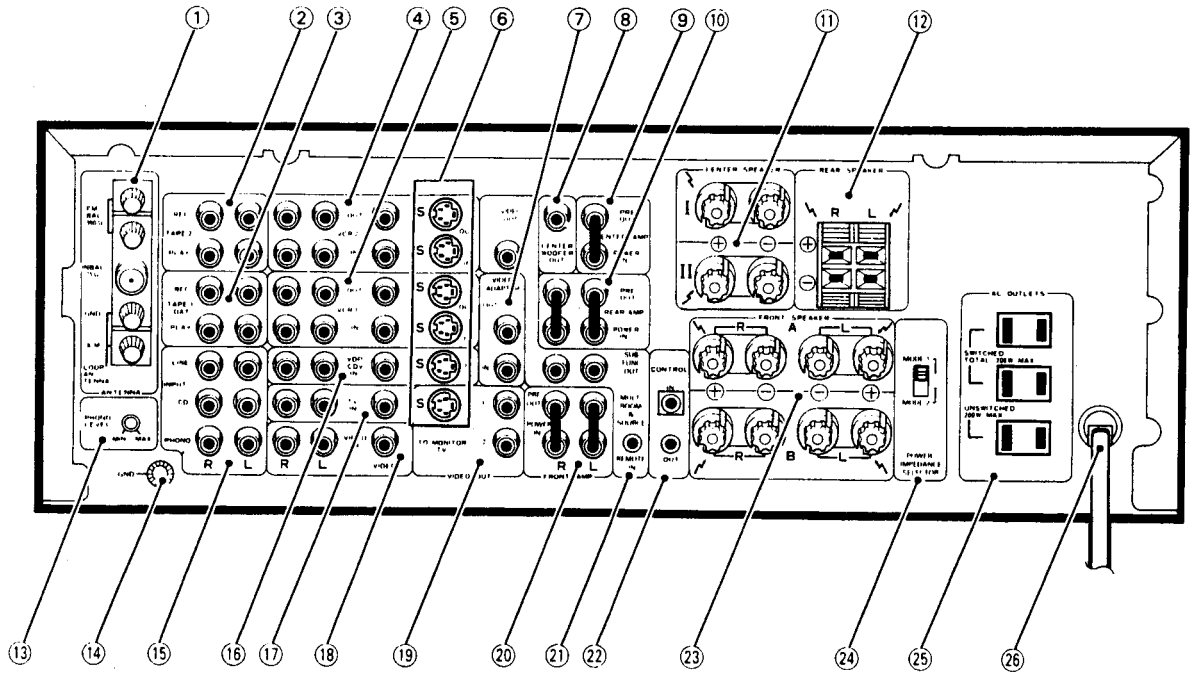
Ⓟ AM B.R. indicator
Lights when the AM B.R. switch is ON.

(Q) DSSS indicator
Lights when the DSSS switch is ON.
(R) TOTAL EFFECT indicator
After selecting the THEATER (including when DOLBY PRO LOGIC SURROUND and THEATER are used together), HALL, CHURCH, DANCE, or JAZZ surround mode, this lights during effect level adjustment with the JOG dial.
(S) DELAY TIME indicator
This lights during DOLBY PRO LOGIC SURROUND delay time adjustment.

(T) Effect level/Delay time/Sleep time display
Displays enhancer effect level, surround effect level, surround delay time, and sleep timer.
(U) Acoustic/Sound field/Enhancer memory display
Displays A to E memory letters.
During acoustic memory display, LOUDNESS or FLAT are also displayed.

REAR PANEL FACILITIES

• Illustration shows U.S. and Canadian models.



① FM/AM ANTENNA terminals

Use these antenna terminals for reception of normal FM and AM broadcasts.
Attach the accessory AM Loop and FM T-type antennas, here.
• For details regarding antenna connection, see the section "HINTS FOR BETTER RECEPTION" on page 48.

② TAPE 2 jacks

Connect a second cassette deck to these jacks.
Connection for Recording
The tape recording jack (TAPE REC) on the cassette deck should be connected to the REC side of the TAPE 2 jack on the receiver with a pin plug connecting cord.
Connection for Playback
Connect the TAPE PLAY jack on the cassette deck to the PLAY side of the TAPE 2 jack on the receiver with a pin plug connecting cord.

③ TAPE 1/DAT jacks

Connect a DAT (digital audio tape deck) or your primary analog cassette deck to these jacks.
Connection for Recording
The tape recording jack (TAPE REC) on the cassette deck or DAT should be connected to the REC side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.
Audio recording from TAPE 2 is not possible.
Connection for Playback
Connect the TAPE PLAY jack on the cassette deck or DAT to the PLAY side of the TAPE 1/DAT jack on the receiver with a pin plug connecting cord.

④ VCR 2 jacks

[VIDEO IN]
Connect to the VCR 2 VIDEO OUTPUT jacks.
[AUDIO IN (L, R)]
Connect to the VCR 2 AUDIO OUTPUT jacks.

[VIDEO OUT]
Connect to the VCR 2 VIDEO INPUT jacks.
[AUDIO OUT (L, R)]
Connect to the VCR 2 AUDIO INPUT jacks.

⑤ VCR 1 jacks

[VIDEO IN]
Connect to the VCR 1 VIDEO OUTPUT jacks.
[AUDIO IN (L, R)]
Connect to the VCR 1 AUDIO OUTPUT jacks.
[VIDEO OUT]
Connect to the VCR 1 VIDEO INPUT jacks.
[AUDIO OUT (L, R)]
Connect to the VCR 1 AUDIO INPUT jacks.

⑥ S (connector) video jacks

When used in conjunction with a VCR, Video disc player (Laserdisc player) or monitor TV equipped with S video jacks, connect to these jacks. See page 7.

⑦ VIDEO ADAPTOR jacks

Use to connect a video adaptor component such as a video enhancer or color corrector.

⑧ CENTER WOOFER OUT jack

If you want to boost the surround center channel low frequencies, or you want to use the unit in a 3D system, connect to a center woofer power amplifier.
Frequencies above about 200 Hz are cut at 18 dB/oct.

⑨ CENTER AMP jacks

[POWER IN]
When a separate pre-amplifier is used for center speaker and this unit is used as a power amplifier, connect the pre-amplifier to this jack.
[PRE-OUT]
When a separate power amplifier is used to drive the center speaker, connect the power amplifier to this jack.

⑩ REAR AMP jacks

[PRE OUT]
When a separate power amplifier is used to drive the rear speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate pre-amplifier is used for rear speakers and this unit is used as a power amplifier, connect the pre-amplifier to these jacks.

⑪ CENTER SPEAKERS terminals

Connecting the surround center channel speaker system(s).
You can connect two speakers for dual center, so you can locate speakers on both sides of the TV.
Speaker impedance:
Refer to ㉔ POWER/IMPEDANCE SELECTOR switch on page 26.

NOTE:
Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

⑫ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.
Speaker impedance
Connect speaker systems with a nominal impedance of between 8 and 16 Ω.

NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdowns may occur when conductors come into contact with each other.

⑬ PHONO LEVEL control

Use to adjust turntable input level. If distortion occurs when you are using a high-output cartridge, adjust the volume level until it's the same as another input, such as TUNER.

⑭ GND terminal

Connect the turntable ground lead to this terminal.

⑮ Audio INPUT jacks

PHONO ..... Connect to turntable.
CD ..... Connect to compact disc player.
LINE ..... Connect to the audio output jacks of an additional audio component.

⑯ VDP/CDV jacks (input)

[VIDEO IN]
When watching the video image from a LD player (Compatible Laserdisc player) or a VCR used for playback, connect its VIDEO OUTPUT jack here.
[AUDIO IN (L,R)]
When playing back the audio channel from a LD player (Compatible Laserdisc player) or a VCR for playback, connect its AUDIO OUTPUT jacks here.

⑰ TV jacks (input)

Use these jacks if wish to connect a TV tuner having both video and audio outputs.
[VIDEO IN]
Connect the TV tuner's VIDEO OUTPUT to this jack.
[AUDIO IN (L, R)]
Connect the TV tuner's AUDIO OUTPUT to these jacks.

⑱ VIDEO jacks (input)

Connect the output jacks of video components.
For example, connect a playback-only VCR or a video camera.

⑲ VIDEO OUT TO MONITOR TV jacks (output)

Use to connect a monitor TV or a TV set with video input terminals for watching program materials from a VCR or Video disc player (Laser Disc player) connected to this unit.

⑳ FRONT AMP jacks

[PRE-OUT]
When a separate power amplifier is used to drive the front speakers, connect the power amplifier to these jacks.
[POWER IN]
When a separate pre-amplifier is connected and this unit is used as power amplifier, connect the pre-amplifier to these jacks.

㉑ MULTI-ROOM & SOURCE jacks

Connect here to enjoy a sub function during Multi-Room and Source operation.

[VIDEO OUT]

Connect the monitor TV for use in room B.

[SUB FUNC OUT]

When operating MULTI ROOM & SOURCE with surround in room A, use this jack for sound in room B.

Refer to Room B example 2 on page 13 for details concerning connections.

[REMOTE IN]

Connect to the separately sold MR-100 Multi-Room remote control unit.

㉒ CONTROL IN, OUT jacks

Used for system control with other Pioneer components bearing the SR mark.

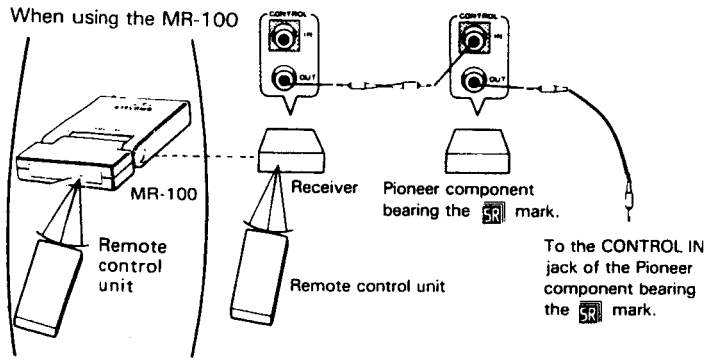
IN: For connection from the CONTROL OUT jack of another component (TV, etc.).

OUT: For connection to the CONTROL IN jack of another component.

NOTE:

The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.

When using the MR-100


MR-100
Remote control unit
Receiver
Pioneer component bearing the SR mark.
Remote control unit
To the CONTROL IN jack of the Pioneer component bearing the SR mark.

㉓ FRONT SPEAKERS terminals

A: Connect to the first set of speakers.

B: Connect to a second set of speakers or speakers for a Multi-Room Source.

Speaker impedance:

Refer to ㉔ POWER/IMPEDANCE SELECTOR switch.

NOTE:

Do not allow any of the code's conductors to protrude from the terminals or touch any other conductors. Malfunctioning or breakdown may occur when conductors come into contact with each other.

㉔ POWER/IMPEDANCE SELECTOR switch

This selects power and speaker impedance.

[POWER]

MODE 1: Front 130W + 130W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 40W (1kHz, 0.08%, 8 Ω)
Rear speakers are 40 W + 40 W (1kHz, 0.08%, 8 Ω)

MODE 2: Front 70W + 70W (20Hz to 20kHz, 0.005%, 8 Ω)
Center 70 W (20Hz to 20kHz, 0.05 % 8 Ω)
Rear speakers are 50W + 50W (1kHz, 0.08%, 8 Ω)

[SPEAKERS IMPEDANCE]

MODE 1:

	FRONT: A		FRONT: A + B	
FRONT	8 ~ 16 Ω		16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	8 ~ 16 Ω	16 Ω	8 ~ 16 Ω	16 Ω

MODE 2:

• If using 4 Ω or more for Front

	FRONT: A		FRONT: A + B	
FRONT	4 ~ 16 Ω		8 ~ 16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	8 ~ 16 Ω	16 Ω	8 ~ 16 Ω	16 Ω

• If using 4 Ω or more for Center

	FRONT: A		FRONT: A + B	
FRONT	8 ~ 16 Ω		16 Ω	
REAR	8 ~ 16 Ω		8 ~ 16 Ω	
CENTER	I	I + II	I	I + II
	4 ~ 16 Ω	8 ~ 16Ω	4 ~ 16 Ω	8 ~ 16 Ω

NOTE:

Turn off the receiver's power before changing the switch setting.

㉕ AC OUTLETS

[U.S. and Canadian models]

SWITCHED TOTAL 200 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 200 W.

UNSWITCHED 200 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 200 W.

[Multi-voltage model]

SWITCHED TOTAL 100 W MAX

Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

UNSWITCHED 100 W MAX

Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTE:

- *This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.*
- *Do not connect appliances with high power consumption such as heaters, irons, or television sets to these AC OUTLETS in order to avoid overheating and fire risk.*
  This can cause the receiver to malfunction.

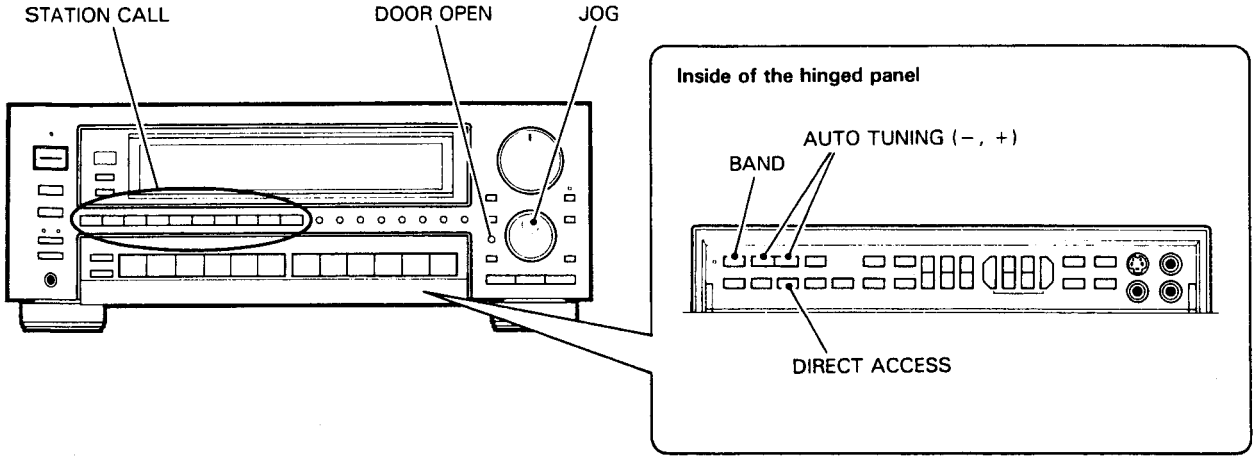
CAUTION:
DO NOT CONNECT MONITOR OR TV SET.

㉖ AC Power cord

Connect to AC wall socket.

TUNER

Press the POWER switch to the ON position.
Select TUNER with the INPUT SELECTOR.
Be sure to turn the TAPE 2 MONITOR switch OFF when listening to AM or FM broadcasts.



MANUAL TUNING

1. **Press the DOOR OPEN switch to reveal the hinged panel.**
2. **Use the BAND switch to select either FM or AM.**
3. **Select your desired frequency with the JOG dial.**
   - Turn the JOG dial clockwise and the frequency increases, turn it counter clockwise and the frequency decreases.
   - When a station is received, the TUNED indicator lights.

AUTO TUNING

1. **Press the DOOR OPEN switch to reveal the hinged panel.**
2. **Use the BAND switch to select either FM or AM.**
3. **Press the "+" or "−" switch of the AUTO TUNING switches.**
   - Pressing "+" causes scanning to take place in the direction of increasing frequency. Pressing "−" causes scanning to take place in the direction of decreasing frequency.
   - When a station is received, scanning will stop (the TUNED indicator lights). If you wish to receive a different station, press the AUTO TUNING switch ("+" or "−") again.

DIRECT ACCESS TUNING

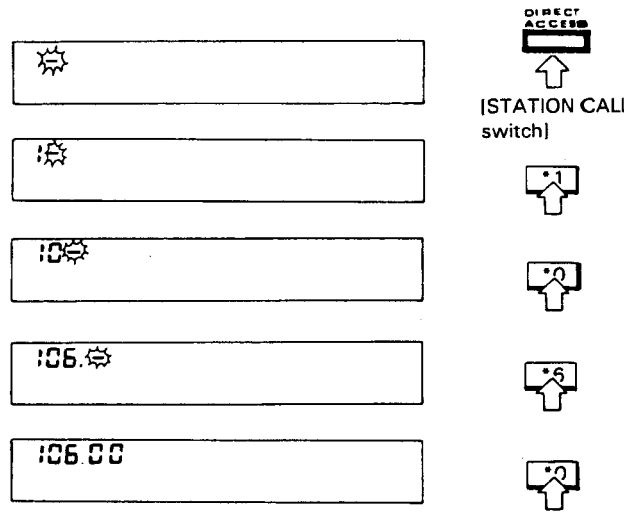
When you know the frequency of the desired station, the frequency can be input directly using the STATION CALL (number) switches in the following way:

1. **Press the DOOR OPEN switch to reveal the hinged panel.**
2. **Use the BAND switch to choose either FM or AM.**
3. **Press the DIRECT ACCESS switch.**
4. **Input the desired station frequency using the STATION CALL switches.**

To cancel frequency input

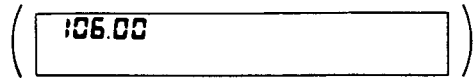
If none of the STATION CALL switches (*1 – *0) are pressed for a period of approximately five seconds, the unit returns to the state it was in before the DIRECT ACCESS switch was pressed.

Direct access tuning example: To receive FM 106.00 MHz

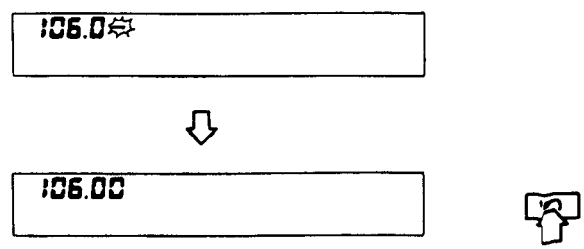


FOR MULTI-VOLTAGE MODEL

- When the CHANNEL STEP switch is set to FM 100 kHz step, the tuning operation is completed and reception begins.

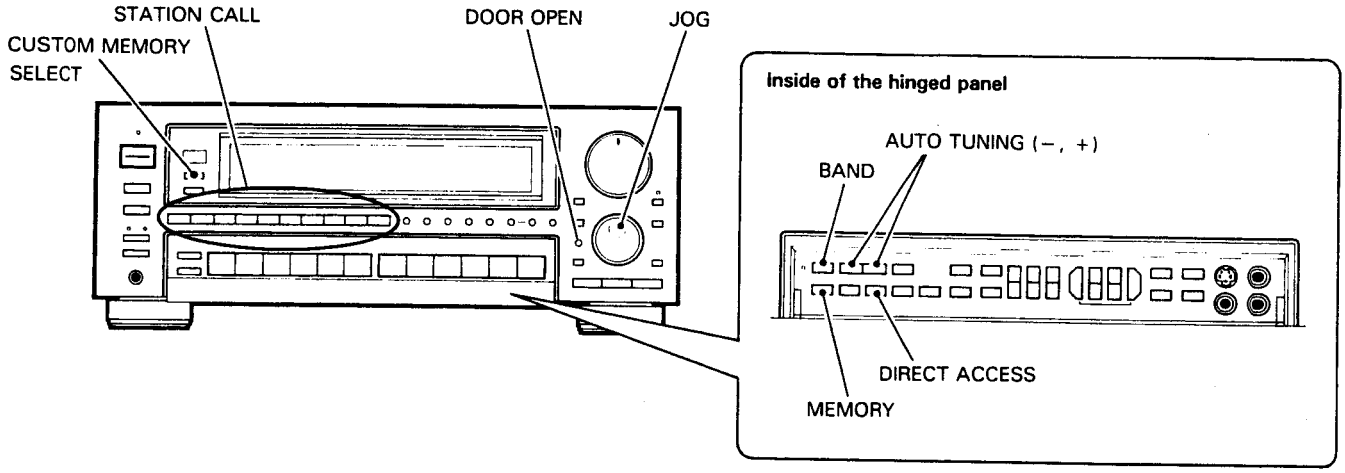


When the CHANNEL STEP switch is set to FM 50 kHz step:



PRESET TUNING

Press the POWER switch to the ON position.
Be sure to turn the TAPE 2 MONITOR switch OFF when listening to AM or FM broadcasts.
At the same time, you can also memorize stations under the following five different genre names according to the material played on the station. (Custom memory)
The five following genres are available.
ROCK
POP
JAZZ
NEWS
PARTY



Frequency Presetting and Custom Memory selection [Frequency Presetting]

1. **Tune into the desired station.**
   - Refer to "MANUAL TUNING", "AUTO TUNING", or "DIRECT TUNING" for tuning procedure.
2. **Press the MEMORY switch.**
3. **Press the STATION CALL switch into which you wish to preset the station.**
   - Use the STATION CALL switches (*1 — *0) to select a STATION CH. One press selects the 1 — 10 range, two presses 11 — 20 and three presses 21 — 30.

   (Example) If you press key [*3] :
   One time — STATION 3
   Two times — STATION 13
   Three times — STATION 23

[Custom Memory selection]

4. **Press the MEMORY switch.**
5. **Display the desired genre with the CUSTOM MEMORY SELECT switch.**
   - The custom memory name is displayed in the REC SEL section of the display.
6. **Select the same number as the STATION CH selected in operation 3. with the STATION CALL switches.**
7. **Repeat steps 1 to 6 to preset additional stations.**
   A total of 30 AM and FM stations may be preset. If you preset a STATION CALL switch into which a station has already been memorized, the former station information will be erased and the new station will be memorized in its place.

Listening to Broadcasts Using Preset Tuning

Press the STATION CALL switch into which the desired station has been preset.

- Use the STATION CALL switches (*1 — *0) to select a STATION CH. One press selects the 1 — 10 range, two presses 11 — 20 and three presses 21 — 30.
  When Custom Memory is being programed, the Custom Memory Name is displayed for about two seconds.

Last station memory

When the POWER switch is pressed to turn power on, the last station received before the power was turned off will be tuned in again.
When the power is ON, if one of the BAND switches is pressed, the last station received on that band will be tuned in again.

FM auto stereo reception and monaural reception

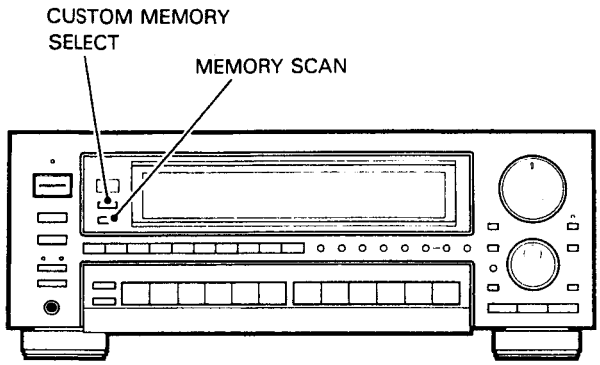
Each time you press the AUTO/MONO switch, the FM MONO indicator in the display section lights or goes out.

- If an FM stereo broadcast is received when the FM MONO indicator is out, the STEREO indicator lights, and sound is in stereo.
- If an FM stereo broadcast is received when the FM MONO indicator is lit, the sound will be monaural.

If there is interference during STEREO mode reception, switch to FM MONO. The sound will become monaural but interference will be reduced.

SHORT-TIME RECEPTION OF CONSECUTIVE STATIONS — Memory scan

Reception of consecutive broadcast stations memorized in STATION CALL switches (each station is received for about five seconds). You can scan all stations, or just the stations memorized in the custom memory.



[Scanning the genres in the custom memory]

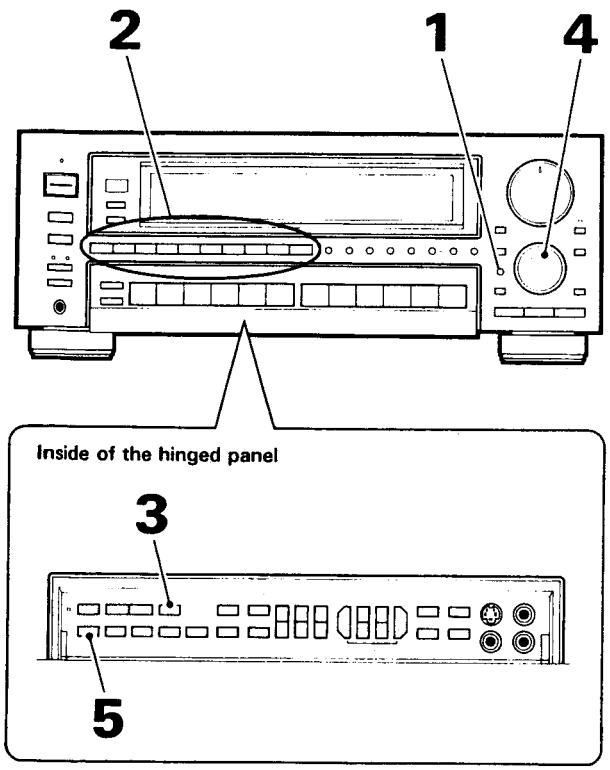
1. **Display the desired genre using the CUSTOM MEMORY SELECT switch.**
2. **Press the MEMORY SCAN switch.**

[Scanning all the stations memorized in STATION CALL switches]

During TUNER display, press the MEMORY SCAN switch.

NAMING A STATION

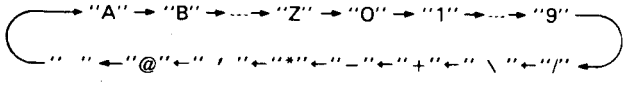
If desired, you may memorize station call-letters and display them. In this case, use the call-letter mode.



Memorizing with the call-letter mode.

- A maximum of four characters can be memorized.

1. **Press the DOOR OPEN switch to reveal the hinged panel.**
2. **Tune into a desired station, and preset in a STATION CALL switch.**
   - Refer to "PRESET TUNING" for preset procedure.
   - Stations already preset can be recalled with the STATION CALL switches.
3. **Press the STATION NAME switch.**
4. **Select the desired character with the JOG dial.**
   - Turning the JOG dial in a clockwise direction changes the characters in the following order.



5. **Press the MEMORY switch.**
6. **By repeating steps 4 and 5 up to four characters can be memorized.**
7. **Repeat steps 2 to 6 when naming other stations.**

Returning to the TUNER display.

1. **Use the JOG MODE switch to select "TUNING".**
2. **Change the reception frequency with the JOG dial.**
   - The station display name will change to "TUNER".

Example: To set the name "ABCD" into STATION CALL switch CH9.

Select CH 9 (Press [*9] once.)

① [•9]

When no station name has been previously memorized.

② TUNER

(When a station name has been previously memorized.)

AAAA

③ STATION NAME — Go on and off

Turn the JOG dial until "A" is displayed.

④ A — Go on and off

When one character is set.

⑤ MEMORY — Go on and off — Light — A_

Repeat the operation for the other characters.

⑥ MEMORY

AB

AB_

ABC

ABC_

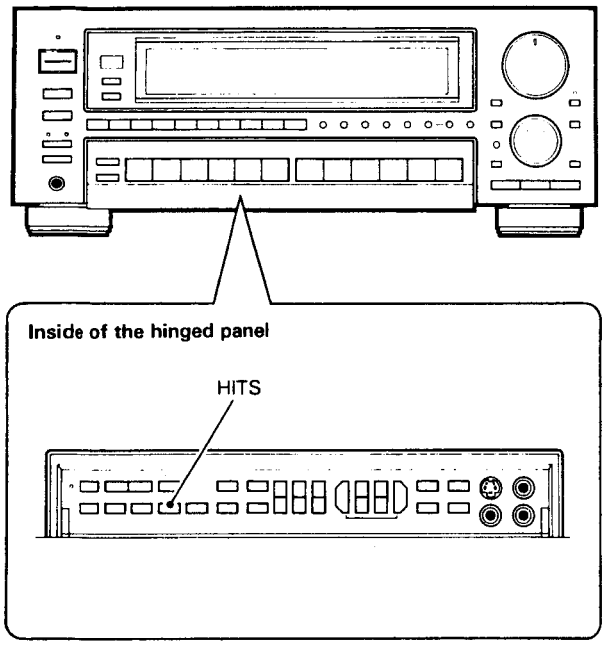
ABCD

ABCD

If all four characters are not set, the new name will not be memorized.
If a name has less than four characters, insert a space (" ").
If frequencies are not yet stored in STATION CALL switches, tune in a station, and then store it in one of the STATION CALL switches.

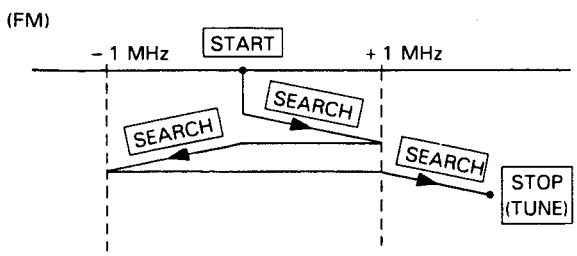
HITS (Hyper Intelligent Tuning System)

You can use the HITS function in the three following situations.



(1) **When inputting frequency numbers for DIRECT ACCESS TUNING:**
- If the HITS switch is pressed during input of numbers for DIRECT ACCESS tuning, the receiver sets the remaining digits which have not yet been input to "0", searches for the corresponding frequencies, and stops on the first station it finds.

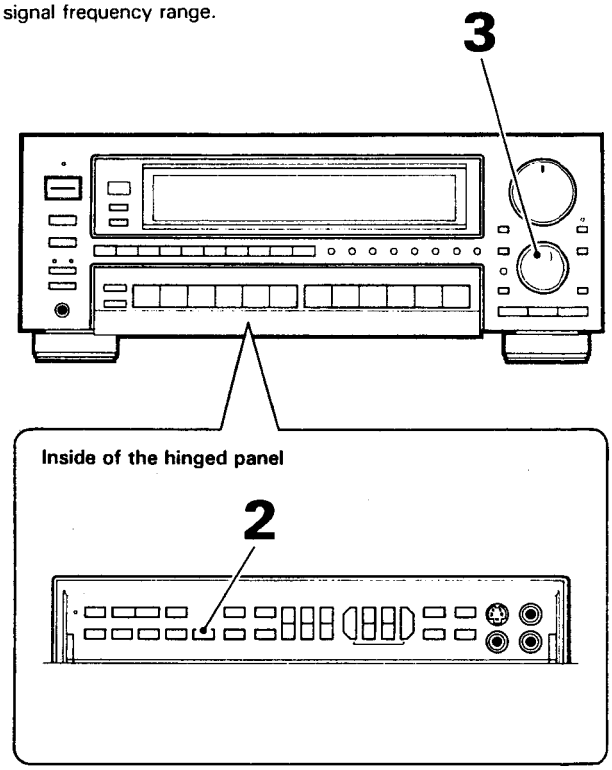
(2) **During frequency display:**
- If the HITS switch is pressed at the currently displayed station frequency, the receiver searches up and down the frequency for the next station (The SEARCH indicator in the display section lights at this time.) and stops at the first one it finds.



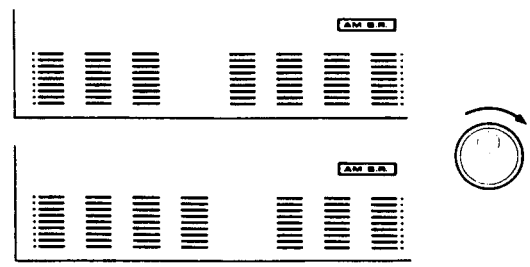
(3) **When inputting a station name:**
If the HITS switch is pressed during station call-letter input and the receiver performs a memory search for other stations in the STATION CALL memory which begin with the same letter(s) (one to four characters) as those you have input (starting from the left). (Each is tuned in for approximately 5 seconds. Press the HITS switch to cancel.)

AM BROADCAST BEAT INTERFERENCE REDUCTION –AM B.R.(AM Beat Reduction)

You can use this only during AM broadcast reception.
To reduce beat interference, this uses DSP to filter part of the AM audio signal frequency range.

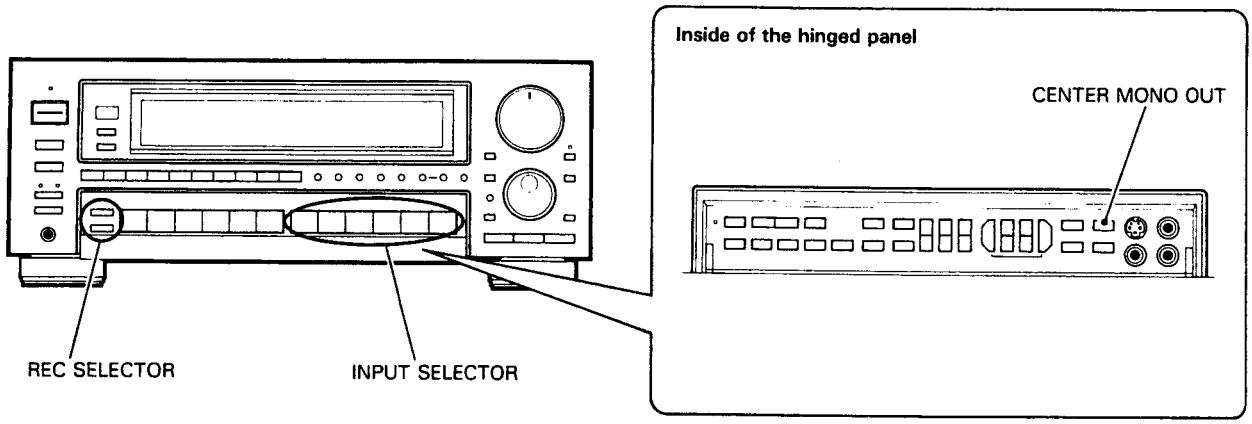


1. **Tune into an AM station.**
2. **Press the AM B.R. switch, and the AM B.R. indicator lights.**
- Tone/Level/balance meter display sections show AM B.R. indications.
3. **Using the JOG dial, adjust until beat interference is minimal.**



OPERATING THE AUDIO COMPONENTS

Press the POWER switch to the ON position, and turn on the power to the other audio components you wish to use.



PLAYBACK

1. **Use the INPUT SELECTOR switches to select the desired audio program source.**

Program source	INPUT SELECTOR
To listen to a tape on the cassette deck (or DAT) connected to TAPE 1/DAT jack	TAPE 1/DAT
To listen to a tape on the cassette deck connected to TAPE 2 jacks	TAPE 2 MONITOR*
To listen to audio components connected to the LINE jacks.	LINE
To listen to compact discs	CD
To listen to record	PHONO

* If you select a music source other than TAPE 2, switch off the TAPE 2 MONITOR.

2. **Operate the appropriate audio component to play back the program source.**
3. **Adjust the volume and tone controls as desired.**
   - When listening to a monaural source, turn the DSSS switch ON to enjoy simulated stereo sound.
   - Refer to page 35 for details concerning surround operation.
   - Refer to page 36 for details concerning sound quality adjustment.

CENTER MONO OUT switch

If center speakers are connected and you are listening with the surround mode OFF (stereo mode), you can press the CENTER MONO OUT switch to output a combination of left and right channel signals as monaural sound through the center speakers. This may be desirable to fill out the middle of the stereo image. The CENTER MODE MONO indicator lights to confirm operation.

RECORDING

You can record sound from TUNER LINE, CD, and PHONO on TAPE 1/DAT, or TAPE 2 cassette decks.
For TAPE 1/DAT, you can select the source with the REC SELECTOR.

RECORDING WITH TAPE 1/DAT

When not using the REC SELECTOR

1. **Make sure the SOURCE indicator in the display section is lit.**
   - If the SOURCE indicator isn't lit, press both the ► and ◄ REC SELECTOR switches at the same time.

2. **Select the source you want to record from (TUNER LINE, CD, or PHONO) with the INPUT SELECTOR switch.**
3. **Load the TAPE 1/DAT cassette deck (or DAT deck) with a tape for recording.**
4. **Start recording on the TAPE 1/DAT cassette deck (or DAT deck).**
5. **Start playback on the component selected with the INPUT SELECTOR switch.**

When using the REC SELECTOR switch

With the INPUT SELECTOR switches, you can select a component and a different recording source. For example, you can listen to a record while recording a CD.

1. **Select the source you want to record from (TUNER LINE, CD, or PHONO) with the REC SELECTOR switches.**
   - The REC SEL indicator lights.

2. **Load the TAPE 1/DAT cassette deck (or DAT deck) with a tape for recording.**
3. **Start recording on the TAPE 1/DAT cassette deck (or DAT deck).**
4. **Start playback on the component selected with the REC SELECTOR switch.**

- Do not select TAPE 1/DAT with the INPUT SELECTOR.

RECORDING WITH TAPE 2

1. **Select the source you want to record from (TUNER LINE, CD, or PHONO) with the INPUT SELECTOR switches.**
   • Be sure the TAPE 2 MONITOR switch is OFF.
2. **Load the TAPE 2 cassette deck with a tape for recording.**
3. **Start recording on the TAPE 2 cassette deck.**
4. **Start playback on the source selected with the INPUT SELECTOR switches.**

USING VCR 1, VCR 2 FOR AUDIO RECORDING

The audio signal output from the VCR 1 and VCR 2 AUDIO REC jacks is the same as that output from the TAPE 1/DAT REC jacks, so you can record using the same procedure as for recording with TAPE 1/DAT.

When using the REC SELECTOR, do not select the component that you are using for recording audio on (VCR 1 or VCR 2) with the INPUT SELECTOR.

COPYING TAPES

The following operations concerns TAPE 1 to TAPE 2 copying. TAPE 2 to TAPE 1 copying is not possible.

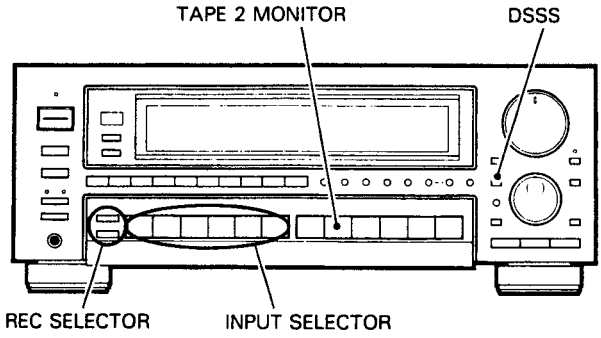
1. **Press the TAPE 1/DAT INPUT SELECTOR switch.**
   • If the TAPE 2 MONITOR switch is ON, press to turn it OFF.
2. **Load the TAPE 1/DAT cassette deck (or DAT deck) with a tape to play back.**
3. **Load the TAPE 2 cassette deck with a tape to record to.**
4. **Start recording on the TAPE 2 cassette deck.**
5. **Start playback on the TAPE 1/DAT cassette deck (or DAT deck).**

Tape monitoring

When recording is performed on a cassette deck equipped with monitoring function, the recorded sound can be monitored through the speaker system by pressing the TAPE 2 MONITOR switch to ON.

OPERATING THE VIDEO COMPONENTS

Press the POWER switch to the ON position, and turn on the power to the other video components you wish to use.



PLAYBACK

1. **Use the INPUT SELECTOR switches to select the desired video program source.**

Program source	INPUT SELECTOR
To watch a video cassette tape on the VCR connected to VCR 1 jacks	VCR 1
To watch a video cassette tape on the VCR connected to VCR 2 jacks	VCR 2
To watch a video cassette tape on the VCR or TV camera, etc., connected to front panel VIDEO 3 INPUT jacks	VCR 3
To watch a video disc on a video disc player or compatible Laserdisc player connected to VDP/CDV IN jacks	VDP/CDV
To watch a TV program (reception with a TV tuner connected to TV IN jacks)	TV
When watching a video played back on a video component connected to the VIDEO IN jacks.	VIDEO

2. **If the TAPE 2 MONITOR switch is ON, press to turn it to OFF.**
3. **When there is no component connected to the VIDEO ADAPTOR jack, set the VIDEO ADAPTOR switch to the OFF position.**
4. **Operate the appropriate video component to play back the program source.**
5. **Adjust the volume and tone controls as desired.**
   - When sound is monaural, turn the DSSS switch ON to enjoy simulated stereo.
   - Refer to page 35 for details concerning surround operation.
   - Refer to page 37 for details concerning picture quality adjustment with the video enhancer.
   - Refer to page 36 for details concerning sound quality adjustment.

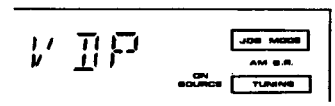
VIDEO RECORDING

You can record audio and video from VCR 3, VDP/CDV, TV, VIDEO, on VCR 1 and VCR 2.
You can also select the video recording source with the REC SELECTOR.

When not using the REC SELECTOR

You can record video that has been adjusted by the enhancer, or video that has passed through a video adaptor.

1. **Make sure the SOURCE indicator in the display section is lit.**
   - When the SOURCE indicator is out, press the ► and ◄ REC SELECTOR switches at the same time to light it.



2. **Select the source you want to record from (VCR 3, VDP, TV, VIDEO), with the INPUT SELECTOR switches.**
3. **Load the VCR 1 (or VCR 2) with a tape for recording.**
4. **Start recording on VCR 1 (or VCR 2).**
   - For VCR 1 or VCR 2, select a line input (external input).
5. **Start playback on the component selected with the INPUT SELECTOR switches.**

When using the REC SELECTOR

You can select a source and different video recording source with the INPUT SELECTOR switches. For example, you can enjoy a video on VCR 3 while recording a video disc. In this case, video recording of a picture that has been adjusted by the enhancer or passed through a video adaptor is not possible.

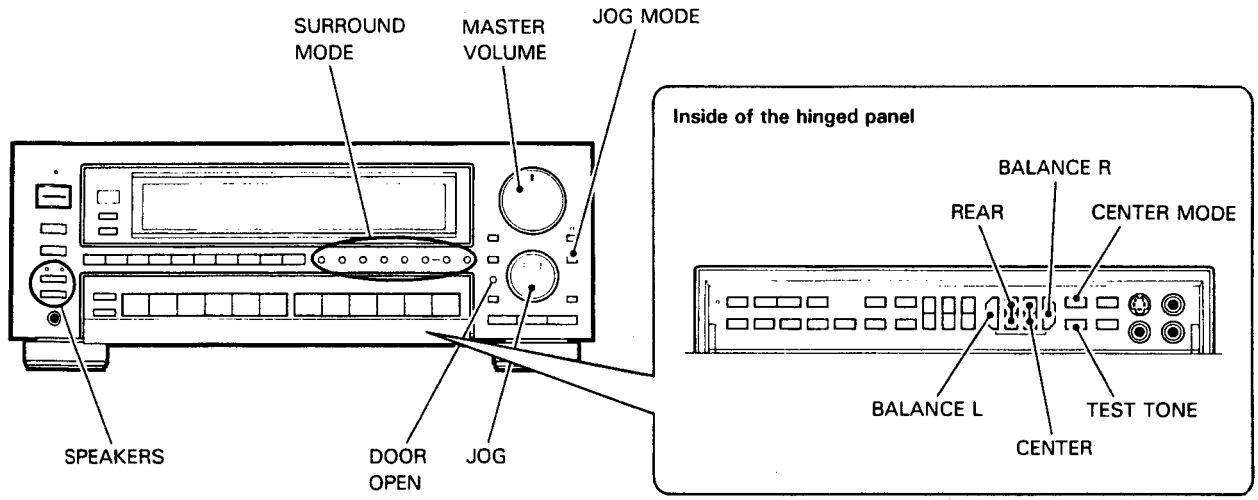
1. **Select the source you want to record from (VCR 3, VDP, TV, VIDEO) with the REC SELECTOR switches.**
   - The REC SEL indicator lights.

2. **Load VCR 1 (or VCR 2) with a tape for recording.**
3. **Start recording on VCR 1 (or VCR 2).**
   - For VCR 1 or VCR 2, select a line input (external input).
4. **Start playback on the component selected with the REC SELECTOR switches.**
   - Do not select the component that you are using to record video on (VCR 1 or VCR 2) with the INPUT SELECTOR.

COPYING VIDEO TAPES

The procedure for copying from VCR 1 to VCR 2, and from VCR 2 to VCR 1 when using REC SELECTOR, and when not using it, are the same as previously mentioned.

USING SURROUND



DOLBY PRO LOGIC SURROUND AND DOLBY 3CH LOGIC

Use with video or audio software bearing the DOLBY SURROUND mark.
Use DOLBY PRO LOGIC SURROUND when rear speakers are connected, and DOLBY 3CH LOGIC when rear speakers aren't connected.

1. **Turn the DOLBY PRO LOGIC or DOLBY 3CH LOGIC switch ON.**
2. **Press the DOOR OPEN switch to reveal the hinged panel.**
3. **Select the center mode with the CENTER MODE switch.**
   - Refer to page 6.

LEVEL ADJUSTMENT

For correct SURROUND reproduction, be sure to perform this adjustment.

1. **Use SURROUND MODE switch to select DOLBY PRO LOGIC SURROUND or DOLBY 3 CH LOGIC SURROUND.**
2. **Use SPEAKERS switches to turn on front speakers.**
3. **Adjust MASTER VOLUME to a suitable listening level.**
4. **Press BALANCE L and R switches together.**
5. **Press CENTER LEVEL + and – switches together.**
6. **Press REAR LEVEL + and – switches together (DOLBY PRO LOGIC SURROUND).**
7. **Select CENTER MODE (NORMAL, WIDE, PHANTOM) setting.**
8. **Turn on TEST TONE switch.**
9. **Adjust so that volume is the same from each speakers. Use BALANCE L and R switches, REAR LEVEL + and – switches (DOLBY PRO LOGIC SURROUND), and CENTER LEVEL switches.**
10. **Turn off TEST TONE switch when finished.**
11. **Use INPUT SELECTOR switches to select your desired source.**
12. **Adjust the desired sound level by the MASTER VOLUME.**

NOTE:

- *The TEST TONE turns off if you operate the INPUT SELECTOR.*
- *If you perform operations 4, 5, and 6 by remote control, adjust balance, center level, and rear level to the center position by pressing the L, R, and +, – keys one at a time. Keys will not operate if pressed at the same time.*

SETTING THE DELAY TIME

When using DOLBY PRO LOGIC SURROUND, you can set the delay time between 15ms and 30ms. The standard setting is 20ms, but you can select any setting of your choice.

1. **Use the JOG MODE switch to light the DELAY TIME in the display section.**
2. **Set the delay time with the JOG dial.**

JAZZ, DANCE, CHURCH, HALL, THEATER — SFC (Sound Field Control) surround

Besides DOLBY PRO LOGIC SURROUND, this unit is equipped with DSP that provides five different SFC surround modes. You can control the level of the surround effect with the JOG dial.

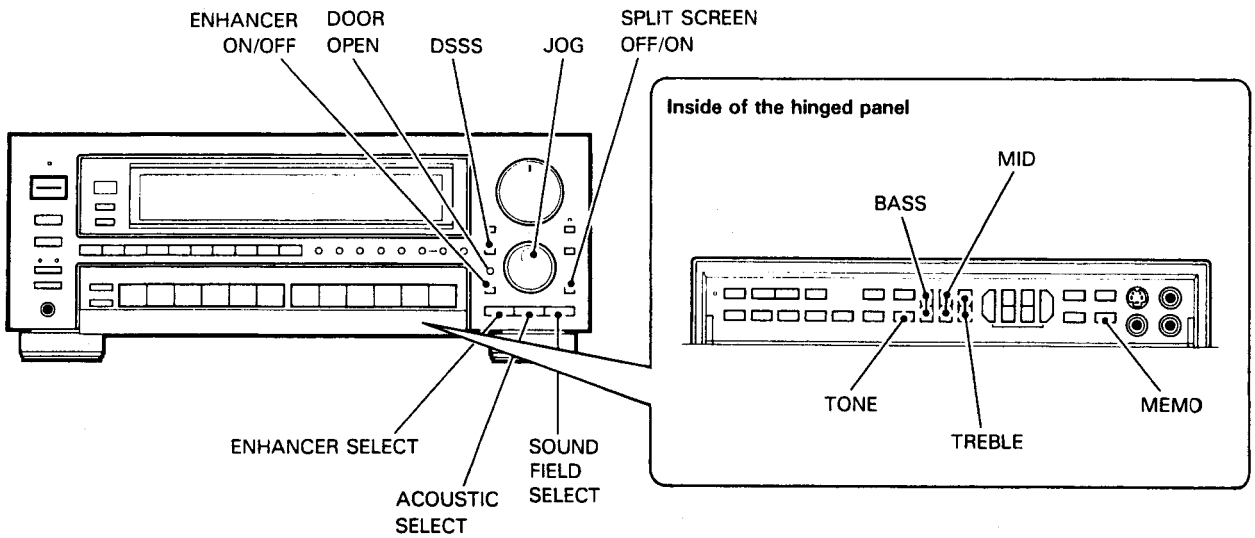
With video software bearing the DOLBY SURROUND mark, switch DOLBY PRO LOGIC SURROUND and THEATER on. This will give you the sound field realism and movement of Dolby Surround together with the ambience and excitement of a movie theater.

Level Adjustment

1. **Turn on TEST TONE switch.**
2. **Adjust so that volume is the same from each speakers. Use BALANCE L and R switches, REAR LEVEL + and – switches, and CENTER LEVEL switches.**
3. **Turn off TEST TONE switch when finished.**

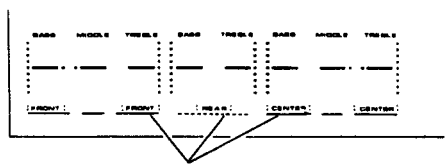
1. **Select one of the SURROUND MODE switches.**
   - The selected surround mode indicator lights in the display section.
2. **Adjust the total effect to your desired level with the JOG dial.**
   - A numerical display from 1 to 100 of the effect level is shown in the display section. For the most enjoyable sound, the best position is usually about 50.

SOUND QUALITY, SOUND FIELD, AND PICTURE QUALITY ADJUSTMENT



HOW TO USE THE TONE CONTROL

1. **Press the DOOR OPEN switch to reveal the hinged panel.**
2. **Select the channel you want to perform tone control on (ALL/FRONT/REAR/CENTER) with the TONE switch.**
   - Channels change to ALL → FRONT → REAR → CENTER in sequence each time you press it.
   - The lit line under the Tone/Level/Balance meters for each channel indicates which channel tone control can be performed on.



You can adjust channels indicated with a lit line.

3. **Adjust the sound using the tone control switches (BASS/MID/TREBLE).**
4. **Repeat operations 2 and 3 until you reach the overall sound you want.**

NOTE:

- *Rear channel tone control is not possible when using DOLBY PRO LOGIC SURROUND.*
- *When the surround mode is OFF, rear channel and center channel tone control is not possible. When the CENTER MONO OUT is ON, center channel tone control is possible.*

HOW TO USE THE ACOUSTIC MEMORY

Use to 5 different tone settings can be memorized.
Memorized tone settings can be recalled using the ACOUSTIC SELECT switch.

Setting the Memory

1. **Perform desired sound quality adjustments.**
   - Refer to "HOW TO USE THE TONE CONTROL"
2. **Press the MEMO switch.**
   - The ACOUSTIC, SOUND FIELD (ENHANCER) indicators on the display section blinks on and off.
3. **While the indicator is flashing, press the ACOUSTIC SELECT switch and select the acoustic memory to which you wish to assign the setting (A - E).**
   - When the memory position letter (A - E) stops flashing and lights up, it is memorized. If a memory position (A - E) is not selected while the indicator is flashing, no memory position is memorized.

Recalling tone setting in the Acoustic Memory

To recall the memorized tone setting, press the ACOUSTIC SELECT switch to select the desired memory position.

FLAT → LOUDNESS → A → B → C → D → E

FLAT: For flat (normal) frequency response.
LOUDNESS: Emphasizes the low- and high-frequency ranges. Produces a fuller sense of sound, particularly when listening at low volume.
A — E: Memorized acoustic memory settings.

HOW TO USE THE SOUND FIELD MEMORY

Sound Field Memory is a function that lets you memorize up to five sound fields you have made by adjusting surround mode, front left and right balance, rear left and right balance, rear level, center level, center mode, delay time, total effect level and other such settings.
Memorized sound field settings can be recalled using the SOUND FIELD SELECT switch.

NOTE:
Even if a setting is one that can be stored in the sound field memory, if it doesn't function in the selected surround mode, it can not be memorized.

The unit has an original setting preset in the "P" position.

[Contents of "P"]

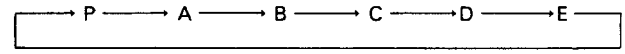
Surround mode	:	DOLBY PRO LOGIC SURROUND
Front balance	:	Center
Rear balance	:	Center
Rear level	:	Center
Center level	:	Center
Center mode	:	NORMAL
Delay time	:	20 ms

Setting the Memory

1. **Adjust for your desired sound field.**
2. **Press the MEMO switch.**
   - The ACOUSTIC, SOUND FIELD (ENHANCER) indicators on the display section blinks on and off.
3. **While the indicator is flashing, press the SOUND FIELD SELECT switch and select the sound field memory to which you wish to assign the setting (A - E).**
   - When the memory position letter (A - E) stops flashing and lights up, it is memorized. If a memory position (A - E) is not selected while the indicator is flashing, no memory position is memorized.
   - Settings cannot be memorized in the "P" position.

Recalling sound field setting in the Sound Field Memory

To recall the memorized sound field settings, press the SOUND FIELD SELECT switch to select the desired memory position.



P: The sound field setting previously memorized in the unit.

HOW TO USE THE ENHANCER AND SPLIT SCREEN

The built-in video enhancer lets you adjust picture quality for playback or recording.
The video enhancer has no effect on S (video) output signals.
When selecting a video component with the input selector, and when the V-SIGNAL SELECTOR is ON, you can switch the enhancer ON.

1. **Turn the ENHANCER ON/OFF switch ON.**
   - ENHANCER LEVEL lights in the display section.
2. **Adjust the effect level with the JOG dial.**

With the split screen, you can see the picture with the enhancer ON and OFF at the same time.

Turn the split screen ON with the SPLIT SCREEN ON/OFF switch, and a vertical line appears in the center of the screen.
When performing enhancer adjustments, the left side shows the picture without enhancer adjustment, and the right side shows the picture with enhancer adjustment. This lets you easily confirm how much you have adjusted the picture with the enhancer.
When using the split screen function, the video signal output from the VCR 1 and VCR 2 REC jacks will provide a complete picture on the screen showing the effects of enhancer adjustment, and not a split screen.

HOW TO USE THE ENHANCER MEMORY

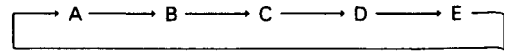
Up to five different enhancer settings can be memorized.
Memorized enhancer settings can be recalled using the ENHANCER SELECT switch.

Setting the Memory

1. **Adjust picture quality to the desired level with the enhancer.**
   - Refer to "HOW TO USE THE ENHANCER AND SPLIT SCREEN".
2. **Press the MEMO switch.**
   - The ACOUSTIC, SOUND FIELD and ENHANCER indicators on the display section blinks on and off.
3. **While the indicator is flashing, press the ENHANCER SELECT switch and select the enhancer memory to which you wish to assign the setting (A - E).**
   - When the memory position letter (A - E) stops flashing and lights up, it is memorized. If a memory position (A - E) is not selected while the indicator is flashing, no memory position is memorized.

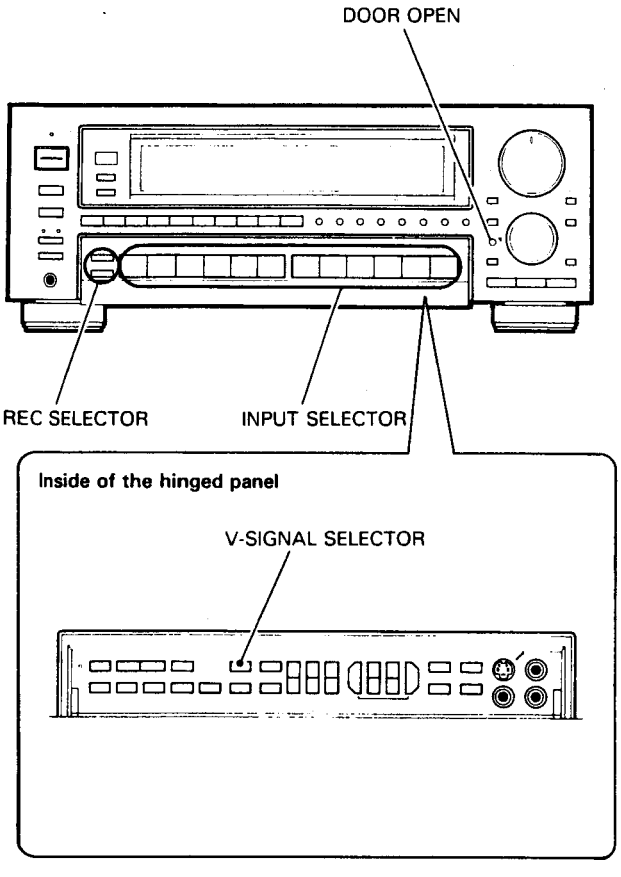
Recalling enhancer setting in the Enhancer Memory

To recall the memorized enhancer settings, press the ENHANCER SELECT switch to select the desired memory position.



USING THE VIDEO SIGNAL SELECTOR

This function can be used to allow you to listen to the playback sound while changing the video image only, thus allowing you to play back and record video images different from the playback sound source. For example, VCR 1 can record video disc picture mixed with CD sound.



1. **Select the component you want to listen to with the INPUT SELECTOR switches.**
   - For example, press CD.
2. **Press the DOOR OPEN switch to reveal the hinged panel.**
3. **Select the video component you want to watch with the V-SIGNAL SELECTOR switch.**
   - The ▭ indicator for the desired component should be lit in the display section.
4. **Start playback of the component selected with the INPUT SELECTOR switches, and the component selected with the V-SIGNAL SELECTOR switch.**

Video Recording

1. **Confirm that the REC SELECTOR is OFF.**
   - If the REC SELECTOR indicator is lit, press both the ► and ◄ REC SELECTOR switches at the same time to switch to the OFF mode.
2. **Load VCR 1 or VCR 2 with a tape for video recording.**
   - If you select VCR 1 with the V-SIGNAL SELECTOR, record on VCR 2, and if you select VCR 2, record on VCR 1. If you select VCR 3, VDP, TV, or VIDEO, you can record on either VCR 1 or VCR 2.
3. **Start recording on the VCR loaded with the tape for recording.**
   - For VCR, select a line input (external input)
4. **Start playback of the component selected with the V-SIGNAL SELECTOR and the component selected with the INPUT SELECTOR switches.**

CAUTION:

- If you must operate the V-SIGNAL SELECTOR switch during recording, do so after setting the recording VCR to the pause mode. If the switch is operated when the tape is traveling during recording, the recorded image and sound may be disrupted at the point at which the switch is operated.
- If you experience no video or wrong video, push the appropriate input selector switch for the function being used.

USING MULTI-ROOM AND SOURCE (MR & S)

Refer to page 13 for details concerning connections.

By incorporating the separately sold MR-100 Multi-Room System remote control unit, you can enjoy playing two sources at the same time. MR & S operation is not possible when the REC SELECTOR is ON. MR & S stops operating when surround is switched ON. If you want MR & S during surround operation, connect SUB FUNC OUT to an external amplifier.

Remote control operation in room B

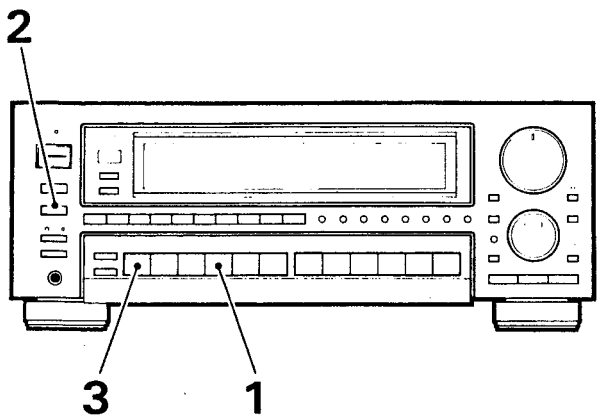
(With room B, only remote control operation is possible.)

1. The following remote control keys can be used to operate the receiver in room B.
   - RECEIVER POWER key.
   - RETURN key.
   - Input selector keys except TAPE 2.
   - MASTER VOLUME (+, −) keys: These adjust room B volume level.
   - SP-B key: Switches room B speakers ON/OFF.
   - SLEEP key: Settings are displayed on the receiver's display, so you cannot confirm them from room B.
     At the set time, power to the main unit switches off, leaving the unit in standby. Sound in room A is also cut at this time.
   - TUNER station call 1-0/10 keys: The function automatically switches to TUNER.
   - Balance and muting operations are not possible in room B.
2. If you connect to the CONTROL jacks of other components, bearing the SR mark, such as a CD player or cassette deck, remote control of these components is also possible.
3. If light from strong fluorescent lamps falls on the MR-100 remote sensor window, remote control operation may not be possible.

For example

When enjoying playback on VCR 1 on SPEAKERS A and the first monitor TV installed in room A, you can enjoy a Laserdisc on SPEAKERS B and MR & S monitor TV in room B.

[Operation]



[Setting MULTI ROOM & SOURCE Sub Function]

1. **Select VDP/CDV with the INPUT SELECTOR switches.**
2. **Turn the MULTI ROOM & SOURCE ON/OFF switch ON.**
   - The switch lights.
   - "SUB FUNC" in the display section lights, VDP is selected.
   - SPEAKERS B switch ON automatically.
   - When MULTI ROOM & SOURCE is ON, the Sub function (room B) at that time is the same as that set with the INPUT SELECTOR. After switching MULTI ROOM & SOURCE ON, the SUB FUNCTION can not be switched on the receiver. Switch it from room B with the remote control unit.

[Setting MULTI ROOM & SOURCE Main Functions]

3. **Select VCR 1 with the INPUT SELECTOR switches.**
4. **Start playback of VCR 1 and the Laser Disc player.**
5. **For room A, adjust volume level with the receiver's MASTER VOLUME control.**
   For room B, point the remote control at the MR-100 and adjust the volume level with the MASTER VOLUME keys.

In room B, when you don't know the present volume level or Sub Function of the receiver, press the RETURN key.
The Sub Function becomes TUNER, and you will hear the broadcast preset in station call No.1. The volume level will be that initially set on the receiver. You can then select your desired Sub Function, and adjust volume to the desired level.

Precautions concerning MULTI ROOM & SOURCE

- In room B, if you use the remote control to switch RECEIVER POWER off (standby), power to the receiver itself is cut, so be careful when recording or copying tapes in room A.
- Remember that if you operate the tuner section in room B and change the station when you are recording a radio broadcast in room A, the station you changed to will be recorded.
- The first time you use MULTI ROOM & SOURCE, volume in room B will be set to the minimum level. Any time you use Multi-Room & Source after that, the volume will be at the level set the previous time you used it (except volume determined by the RETURN switch).
- When MULTI ROOM & SOURCE is ON, room B Sub Function and room B volume level cannot be changed in room A.
- MULTI ROOM & SOURCE can only be switched ON/OFF with the switch on the receiver itself. Set the Sub Function in room A, switch MULTI ROOM & SOURCE ON, and move to room B. Volume levels in room A and room B are independent.

- When operating MULTI ROOM & SOURCE with the SUB FUNC OUT jacks connected to the room B amplifier, if the amplifier bears the Pioneer SR mark and has a remote sensor, both the MR-100 and the amplifier may receive remote control commands, making correct operation impossible. Place the MR-100 and amplifier apart from each other, and point the remote control directly at the MR-100 to operate.
- In room A and room B, when a remote control signal is transmitted at the same time, the receiver does not operate.
- When MULTI ROOM & SOURCE is off, the MR-100 operates as a regular multi-room remote sensor, so you can operate the receiver by remote control from room B.
- When the rear channel PRE OUT jacks are connected to an amplifier, even if you switch MULTI ROOM & SOURCE ON, there will be no sound from SPEAKERS B. Use the SUB FUNC OUT jacks for MULTI ROOM & SOURCE.
- With MULTI ROOM & SOURCE, room B volume level cannot be set to 0 (sound will still be heard). When sound is not wanted, switch SPEAKERS B OFF; to regain sound, switch SPEAKERS B ON.

- **Switch setting and output**

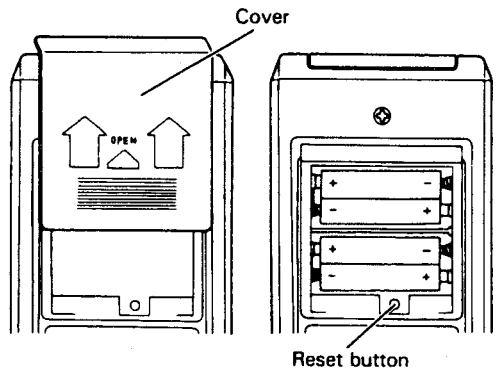
SWITCHES			AUDIO OUTPUT JACKS			SPEAKERS OUTPUT			VIDEO	
MULTI ROOM & SOURCE	SURROUND MODE	REC SELECTOR	SUB FUNC OUT	REAR AMP PRE OUT	REC	A	B	REAR	TO MONITOR TV	MULTI ROOM & SOURCE VIDEO OUT
OFF	OFF	OFF	Main Function	Mute	Main Function	Main Function	Main Function	Mute	Main Function	Main Function
OFF	OFF	ON	REC SELECTOR Function	Mute	REC SELECTOR Function	Main Function	Main Function	Mute	Main Function	REC SELECTOR Function
ON	**OFF**	**OFF**	**Sub Function**	**Sub Function**	**Main Function**	**Main Function**	**Sub Function**	**Mute**	**Main Function**	**Sub Function**
ON	OFF	ON								
OFF	ON	OFF	Main Function	SUR Rear	Main Function	SUR Front	SUR Front	SUR Rear	Main Function	Main Function
OFF	ON	ON	REC SELECTOR Function	SUR Rear	REC SELECTOR Function	SUR Front	SUR Front	SUR Rear	Main Function	REC SELECTOR Function
ON	ON	OFF	Sub Function	SUR Rear	Main Function	SUR Front	SUR Front	SUR Rear	Main Function	Sub Function
ON	ON	ON								

• VIDEO (REC) OUT is the same source as AUDIO (REC) OUT. When the input selector is switched to the audio source, VIDEO OUT is mute.
SUR: Surround

REMOTE CONTROL

LOADING BATTERIES

1. **Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you slide it in the direction of the arrow while pressing on it with your thumb.**
2. **Take out the four supplied batteries (LR03/AM-4), and insert them into the battery compartment in accordance with the indications in the compartment.**
3. **Close the cover of the battery compartment.**



Incorrect use of batteries may lead to leakage or rupture. Always be sure to follow these guidelines:

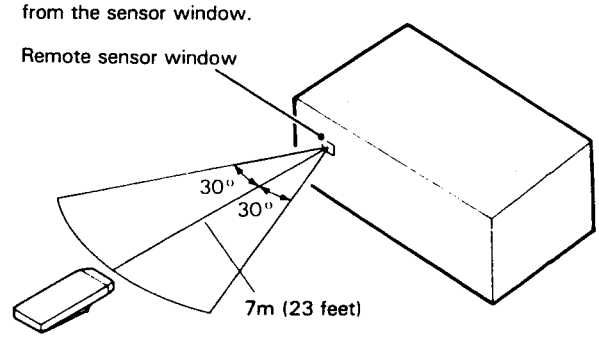
A.
Always insert batteries into the battery compartment correctly matching the positive + and negative − polarities, as indicated inside the compartment.

B.
Never mix new and used batteries.

C.
Batteries of the same size may have different voltages, depending on their type. Do not mix different type of batteries.

REMOTE CONTROL RANGE

When operating the remote control unit, point the front of the unit at the front panel of the receiver. The remote control unit may be used within a range of about 7 meters (23 feet) from the remote sensor, within angles of up to about 30 degrees.
Performance of the remote control unit is adversely affected in the presence of strong fluorescent light. Keep such lights away, specially from the sensor window.



Battery Replacement

When the batteries have run out, the transmit indicator will not illuminate even when a key is pressed. Be sure to replace the batteries as soon as possible. As the programmed functions will be retained in memory only as long as batteries are inserted, remove the old batteries only if they can be replaced by new ones immediately.
Also, be sure to always use the specified batteries. [size "AAA" (LR03/AM-4) alkaline batteries]

NOTE:
When no batteries are inserted, the programmed memory contents will be erased after 30 to 60 minutes.

OPERATION

① TRANSMIT mode selector switch

AUDIO:
Select this position for remote control operation of audio equipment such as a CD player, cassette deck, turntable or receiver.
VIDEO:
Select this position for remote control operation of video equipment such as a Video disc player (LD player), VCR or TV.
AUX:
The AUX mode is provided for programming extra commands in case you have filled up all the keys in the VIDEO and AUDIO modes. If you do not program any new commands, then only the receiver amplifier keys will operate in this mode. You may wish to use this mode to assign extra commands for a second VCR, tape deck etc.

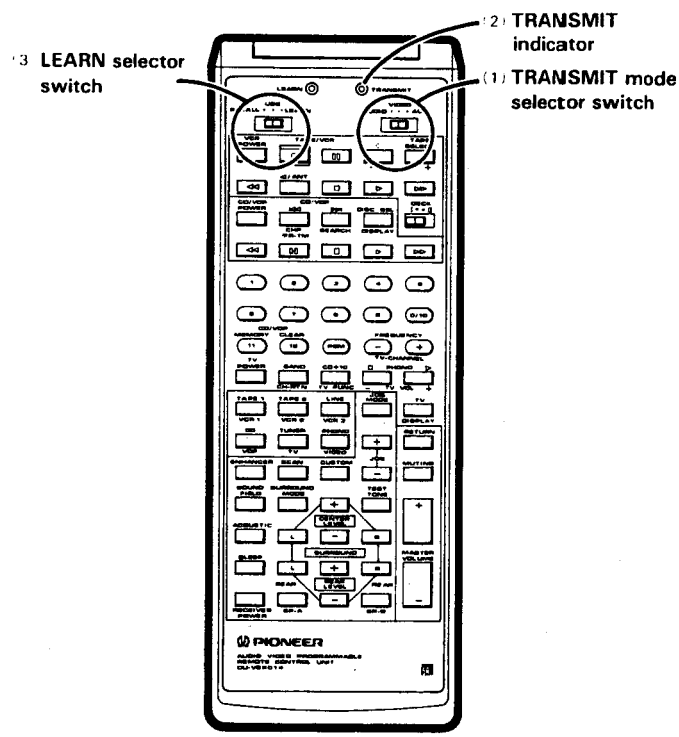
- Keys 1 to 12 are used as station keys for TUNER and TV. (In the CD and VDP modes 1 to 10 are number keys, 11 is the MEMORY, and 12 is the CLEAR key.) Use keys 1 to 0/10 to operate this unit's tuner section.
- In the AUX mode, only the receiver keys transmit. Use after programming into memory the commands of your other remote control unit.

② TRANSMIT indicator

This light flashes when remote control signals are being sent.

③ LEARN selector switch

For Pioneer components set this switch to SR RECALL. Set to LEARN when programming the memory, and set to USE when using the memory. (More about LEARN switch on page 46.)



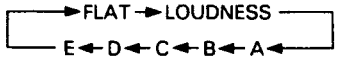
The initial functions can operate all products compatible with PIONEER's common system remote control units marked with the symbol SR .

■ AMPLIFIER SECTION OPERATIONS

Set the LEARN select switch to SR RECALL.

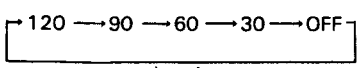
Input selector keys:
Used to select the receiver input.
TRANSMIT mode selector: AUDIO
You can select TAPE 1, TAPE 2, LINE, CD, TUNER or PHONO.
Press TAPE 2 to switch between source and monitor.
TRANSMIT mode selector: VIDEO
You can select VCR 1, VCR 2, VCR 3, VDP, TV or VIDEO.

ACOUSTIC select key:
The acoustic setting changes in the following manner each time this key is pressed.



MUTING key:
Used to temporarily mute the sound. The volume is restored when pressed again.

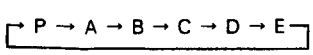
SLEEP timer key:
Activates the SLEEP timer. During SLEEP timer operation, the "dimmer" function decreases the brightness of the display section. The duration changes in the following manner each time the key is pressed:



unit: minutes

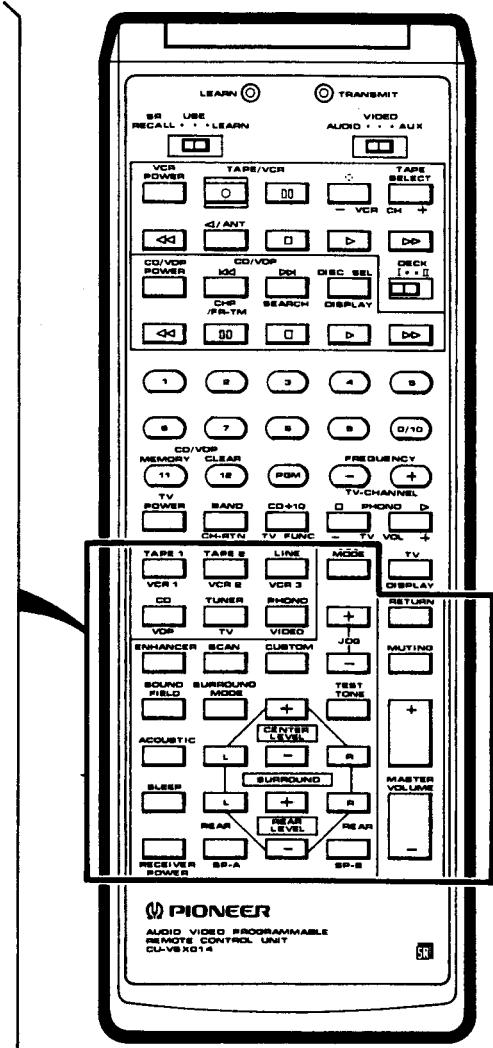
RECEIVER POWER key:
Switches the receiver power between ON and STANDBY.

SOUND FIELD select key:
The sound field setting changes in the following manner each time this key is pressed.



ENHANCER key:
Use to switch the video enhancer ON/OFF.

CUSTOM select key:
This recalls custom memory genre names in sequence.



SCAN key:
Use this to begin memory scan operation.

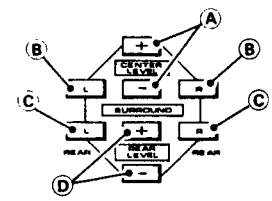
JOG MODE key:
Use this to select JOG MODE.

JOG (+, –) keys:
+: Pressing this is the same as turning the JOG dial on the main unit in a clockwise direction.
–: Pressing this is the same turning the JOG dial on the main unit in a counter-clockwise direction.

SURROUND MODE key:
The surround mode is switched each time the key is pressed:

MASTER VOLUME (+, –) keys:
Adjusts the overall (front, center and rear) volume.

SURROUND keys:



Use these keys to adjust the surround sound.

(A) **CENTER LEVEL (+, –)**
Adjusts the center speaker sound level.

(B) **MASTER BALANCE (L, R)**
Adjusts the balance of the left and right front and rear speakers.

(C) **REAR BALANCE (L, R)**
Adjusts the balance of the left and right rear speakers.

(D) **REAR LEVEL (+, –)**
Adjusts the sound level of the rear speakers to the level of the front speakers.

SP-A key:
ON/OFF switch for SPEAKERS A

SP-B key:
ON/OFF switch for SPEAKERS B

RETURN key:
Press the RETURN key to return the unit to the initial state. TUNER is selected at this initial state. Adjust the sound level with the MASTER VOLUME keys.
When Room B is selected using MULTI ROOM & SOURCE, then this causes RETURN operation for Room B (Refer to page 38).

TEST TONE key:
This outputs a test tone when surround is ON.

REMOTE CONTROLLING OF ANY OTHER OF YOUR AUDIO-VISUAL COMPONENTS VIA THIS UNIT REQUIRES:

1. All components must be remote controllable (have sensor window on front panel) to receive direct command from this unit, upon successful learning of those commands by this programmable unit or,
2. All unit must have remote control jacks (IN/OUT) on the rear panel and be correctly connected to the receiver according to the diagram on page 26.

■ CD PLAYER OPERATIONS

Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to AUDIO.

CD Function Keys (Operation of CD player)

CD/VDP POWER key:
Switches CD player power ON/OFF.
This only applies to CD player which you can switch ON/OFF by remote control operation.

|◄◄ (TRACK SEARCH) key:
Returns to the beginning of the track currently in playing.

►►| (TRACK SEARCH) key:
Advances to the next track.

DISC SEL key:
Selects the DISC No. (1 to 6) for Multi-play CD players.

PGM (PROGRAM) key:
Press to program the CD player.

◄◄ (MANUAL SEARCH) key:
Selects fast backward.

II (PAUSE) key:
Pauses playback.

■ (STOP) key:
Stops playback.

► (PLAY) key:
Selects playback.

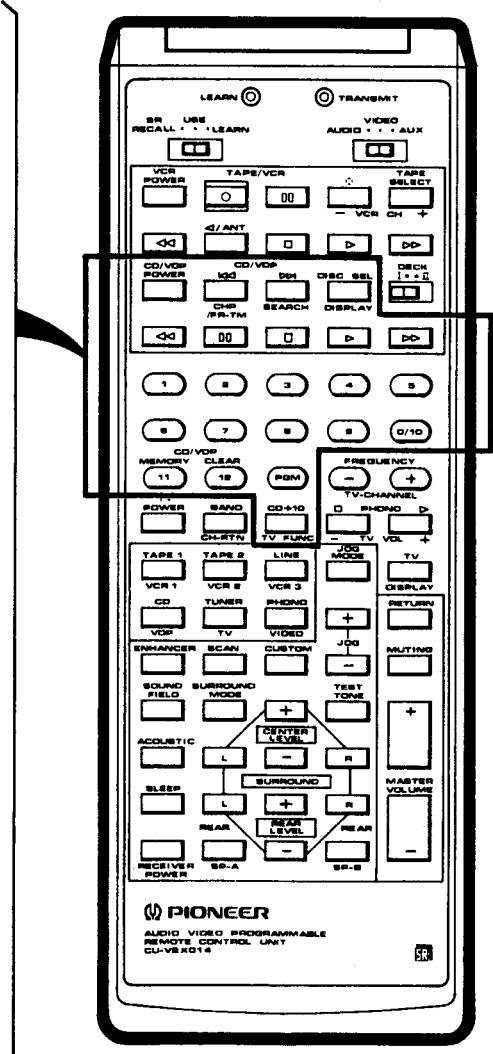
►► (MANUAL SEARCH) key:
Selects fast forward.

1* — 0/10*(NUMERIC) keys:
For direct selection of a track or programming of tracks.

MEMORY* key:
Memorizes a program.

CLEAR* key:
Erases a memorized program.

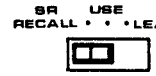
* When using them as CD keys, first press the PGM key. If you don't press the PGM key, they will operate as keys for the STATION CALL tuning function.



CD + 10 key
Use this key when programming a TRACK NUMBER higher than 10. (Example) When programming TRACK NUMBER 21, press the CD + 10 key twice and then key 1.

NOTE: You may not be able to use the CD + 10 key with certain CD players.

■ VDP OPERATIONS



Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to VIDEO.

VDP function keys (operation of LD player)

CD/VDP POWER key:
Switches VDP power ON/OFF.
This only applies to LD players which you can switch ON/OFF by remote control operation.

DISPLAY call key:
Clears the chapter and frame/time displays on the screen.

PGM (PROGRAM) key:
Allows use of chapter program play, frame search and time search.

◄◄ (SCAN) key:
Selects fast backward.

II (PAUSE) key:
Video and audio are stopped and playback is paused.

■ (STOP/EJECT) key:
Playback is stopped when pressed once. Pressing again causes the disc table to come out.

► (PLAY) key:
Selects playback.

►► (SCAN) key:
Selects fast forward.

1* — 0/10* (NUMERIC) keys:
Used for chapter and frame/time number search and for chapter program play.

MEMORY* key:
Used for chapter program play.

CLEAR* key:
Used for releasing repeat playback, number correction and mode release during search operation, and for releasing chapter program play.

* When using them as VDP keys, first press the PGM key. If you don't press the PGM key, they will operate as keys for the TV CHANNEL CALL function.

CHP/FR-TM (CHAPTER/FRAME•TIME)key:
Used for chapter or frame (time) search operation.

SEARCH key:
Used for the search operation and for the memory repeat operation.

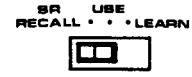
The initial functions can operate all products compatible with PIONEER's common system remote control units marked with the symbol SR.

■ CASSETTE DECK OPERATIONS

Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to AUDIO.

■ VCR OPERATIONS



Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to VIDEO.

TAPE function keys (operation of cassette tape deck and multi-cassette changer)

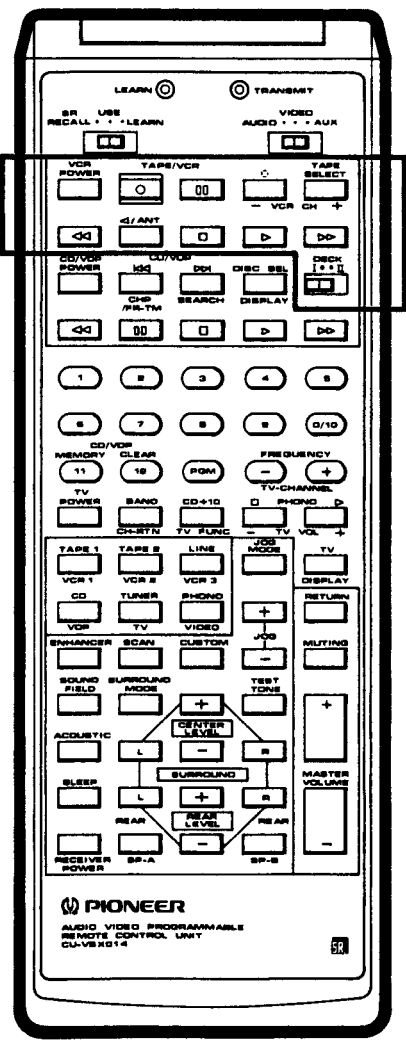
- **o (REC MUTE) key:** For insertion of silent spaces between selections.
- **● (REC) key:** Selects the recording mode.
- **II (PAUSE) key:** Temporarily stops tape transport. Press again to resume tape transport.
- **◄◄ (FF) key:** Rapidly advances the tape in the direction of the arrow.
- **◄ (PLAY) key:** Selects reverse playback.
- **■ (STOP) key:** Stops the tape transport.
- **► (PLAY) key:** Selects forward playback.
- **►► (FF) key:** Rapidly advances the tape in the direction of the arrow.

DECK I/DECK II switch: This switch selects the deck to be used.

TAPE SELECT key: Selects the cassette No.(1 to 6) for multi-cassette changer.

NOTE:

- *Some cassette decks cannot be controlled using the switch.*
- *The ◄ key can only be used with cassette decks capable of reverse play.*
- *Some keys will not work with all types of cassette deck. Refer to the operating instructions for more information.*



VCR function keys (operation of VCR)

VCR POWER key: Switches VCR power ON/OFF.

- **● (REC) key:** Selects the recording mode.
- **II (PAUSE/STILL) key:** Sets pause and still picture.

VCR CH – (DOWN) key: Shifts channels in descending order.

VCR CH + (UP) key: Shifts channels in ascending order.

- **◄◄ (REW) key:** Rewinds the tape and allows picture search.

ANT key*: This key can be used only for VCRs with a VCR/TV selector. Toggles the antenna output between VCR and TV.

- **■ (STOP) key:** Stops tape transport.
- **► (PLAY) key:** Selects playback.
- **►► (FF) key:** Rapidly advances the tape and allows picture search.

* For switching the antenna input for an optional VCR, the code of the VCR remote control must be memorized.

■ TUNER SECTION AND TURNTABLE OPERATIONS

Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to AUDIO.

TUNER function keys (operation of FM/AM Tuner)

1 to 12 (STATION CALL) keys:
For recall of tuner presets.
Keys 1 to 0/10 are used for the receiver.
(Keys 11 and 12 cannot be used)

FREQUENCY + (UP):
Shifts the frequency up.

FREQUENCY – (DOWN):
Shifts the frequency down.

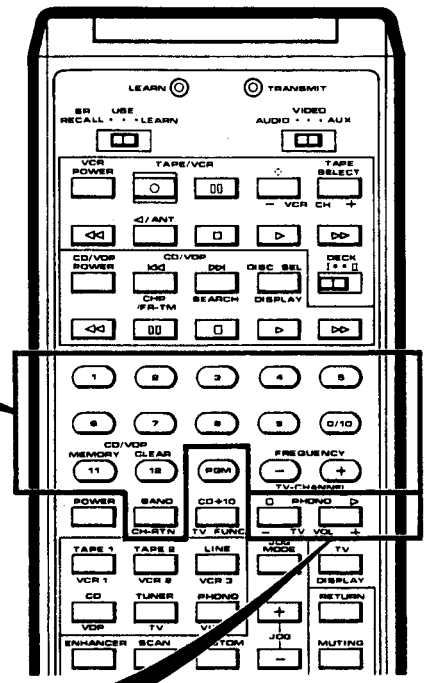
> For auto tuning with the VSX-D1S, use the FREQUENCY + and – keys.

BAND key:
Switches the FM and AM bands by turns.

PHONO function keys (operation of turntable)

► **(PLAY) key:**
Selects play.

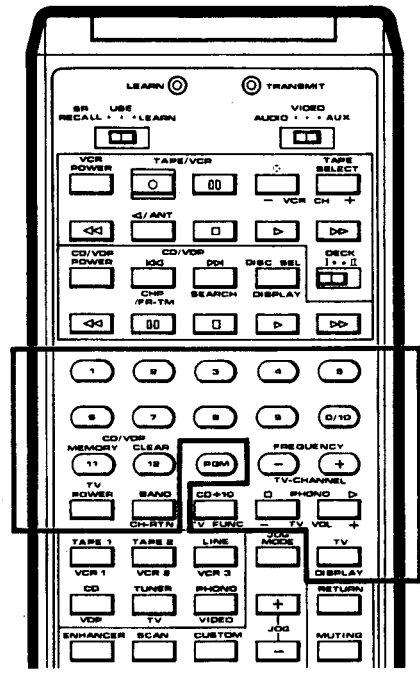
■ **(STOP) key:**
Stops play.



■ TV OPERATIONS

Set the LEARN select switch to SR RECALL.

Set the TRANSMIT mode selector switch to VIDEO.



TV function keys (operation of component display or projection monitor receiver)

1 to 12 (CHANNEL CALL DIGIT) keys:
Used to call up channels.

CH-RTN (RETURN) key:
Returns to the previously received channel.

TV-CHANNEL + (UP) key:
Changes the channel in the direction of larger CHANNEL CALL DIGIT numbers.

TV-CHANNEL – (DOWN) key:
Changes the channel in the direction of smaller CHANNEL CALL DIGIT numbers.

TV VOL +, – keys:
Raises and lowers the volume.

TV POWER key:
Switches the power of the TV ON/OFF.

TV FUNC (TV FUNCTION) keys.
Used to change the TV FUNCTION.
• The TV FUNC key cannot be used with some Pioneer TVs.

TV DISPLAY key.
TV image display ON/OFF

PROGRAMMING

Introduction

This system remote control can "learn" the commands of other remote control units, regardless of manufacturer, as long as the other unit is of the infrared type.

On rare occasions, programming this unit may be impossible with some special types of infrared remote control units.

In some cases you may still need the original remote control unit for special situations. But as a rule, you will be able to use this Pioneer remote for most system control needs, including video as well as audio equipment.

LEARNING KEYS

All the keys are programmable. When programming a key, the previous program on the key is erased.

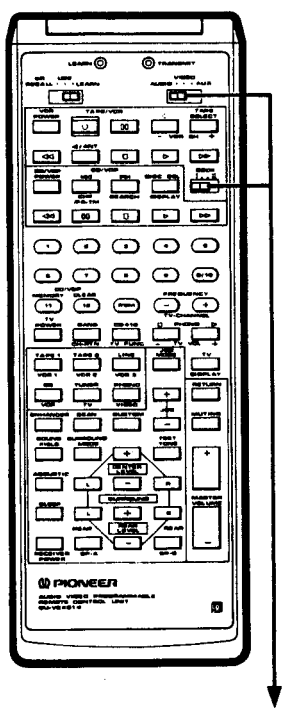
In the AUDIO and VIDEO modes, the Pioneer unified remote control code is already programmed in the unit. If your audio and video equipment consists of Pioneer components, the remote control unit can be used as is. If you wish to program functions which do not already exist in the memory, use the LEARN function to program them. It is also possible to return to the original Pioneer commands after programming other commands. (Refer to "Returning to the Initial Settings" for this procedure.)

- In each mode, one function per key can be programmed.
- When presetting keys, make sure that the remote control units of both this and the other component are loaded with fresh batteries.

LEARNING CAPACITY

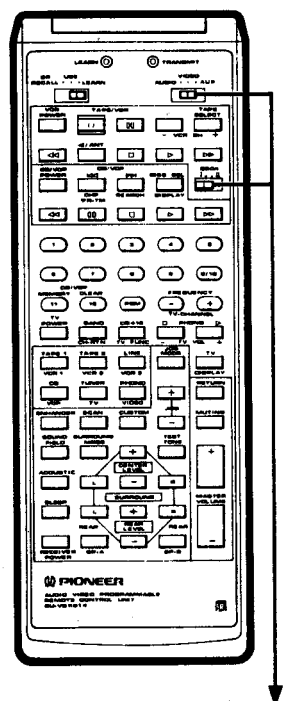
A maximum of 226 commands can be learned (About 150 commands are adequate for Pioneer's remote control signal). More commands than this can't be programmed even if there are keys which have not been preset.

AUDIO mode



In the AUDIO MODE, the TAPE function keys can be programmed to store commands for DECK I and DECK II depending on the position of the DECK I/DECK II switch. (A maximum of 82 keys can be programmed)

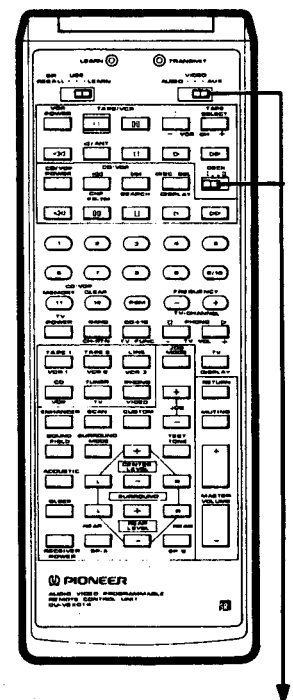
VIDEO mode



In the VIDEO mode the DECK I/ DECK II switch is inoperative.(A maximum of 72 keys can be programmed)

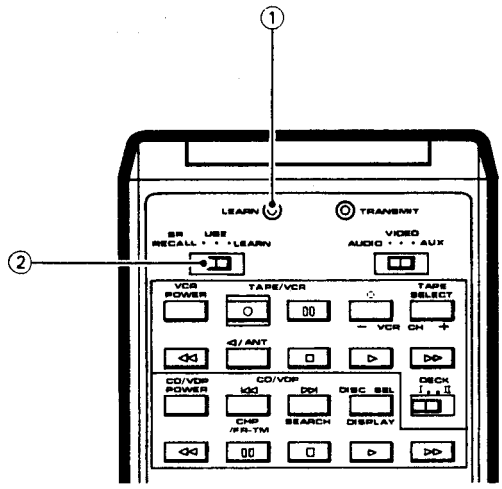
When teaching functions with names that differ from those of the keys, write in the names or codes of the functions on the supplied templates and place on the key.

AUX mode



In the AUX mode the DECK I/ DECK II switch is inoperative. (A maximum of 72 keys can be programmed)

See page 47 for related information.



① LEARN indicator

This indicator lights when the Learn function is activated.
ON: Learning is possible.
OFF: Regular remote control functions can be performed.

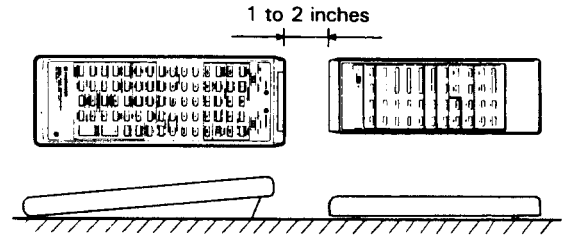
NOTE: If the LEARN indicator flashes, this indicates that the program capacity is exceeded and that the last command is not memorized.

② LEARN selector switch

This can be set as follows:
LEARN:
This position is used for storing the codes of your remote control unit.
USE:
Set to this position after codes have been stored in the LEARN position. (Set to this position when using memorized commands.)
SR RECALL:
Set to this position when transmitting Pioneer unified remote control code signals (Marked on the remote control unit).

[Operation example]

1. Set the LEARN switch of the programmable remote control unit to the LEARN position and set the TRANSMIT mode selector switch to the VIDEO position.
   - Programming is possible with the TRANSMIT mode selector switch in any position, but VIDEO is used as an example.
2. Place the transmission sections of the programmable remote control unit and the remote control of the VCR facing each other.



   - Place the two units on a table, separated by 2 to 5 cm (1 to 2 inches).
     Memorization will not be possible if they are too close.
3. Hold down the VCR PLAY key of the Programmable remote control unit until the LEARN indicator light up, then release the key.
4. Hold down the PLAY key of the VCR remote control unit.
5. Release the key of the VCR remote control unit after making sure that the LEARN indicator has gone out on the Pioneer remote control unit.

NOTE:
If the LEARN indicator flashes, it indicates that you are trying to preset a key not available for the learning function, or otherwise the program capacity has been exceeded, the function programmed last will not be memorized correctly. All previously programmed functions, however, will be retained in memory and may be used as they are if the last function is not essential. For re-programming refer to page 47 "Returning to the Initial Settings."

6. Set the LEARN selector switch of the programmable remote control unit to the USE position.
   - The previous code (Pioneer uniform remote control code or code for other equipment) is erased and replaced by the new code.
7. Check that the program works.
   - Try actual operation and make sure the unit works properly.
   - If the VCR does not operate when pressing the key, change angle, position and distance between the remote control units and repeat the programming procedure.
   - When programming, make sure that the function indications (for example, ▶, ▶▶, ■) on the other remote control unit and the programmable remote control unit are the same. This will facilitate operation.

NOTE:
Be careful when using the learn function because signals from the transmitting remote control unit may be reflected from walls or the ceiling, and may arrive at the sensor of a component other than the programmable remote control unit. It's a good idea to remove the tape from a cassette deck or VCR in case they are accidentally activated. It is also preferable to unplug the power cords of system components from power outlets, or cover the remote sensors of remote controlled components to prevent accidental operation.

Questions and Answers about the Learning Function

Q: The remote control unit of my VCR has two REC (recording) keys. They both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the two keys on the VCR remote control simultaneously.

Q: The remote control unit of my VCR has a REC (recording) key and a PLAY (playback) key and they both have to be pressed at the same time to start recording. What is the learning procedure in this case?

A: Hold one of the keys on the programmable remote control depressed (for example the VCR ● key) until the LEARN indicator lights up, and then press the REC and PLAY keys on the VCR remote control simultaneously.

- As described above, operations which require two keys to be pressed at the same time are programmed by pressing the two keys simultaneously.

Operating other equipment using the programmable remote control unit

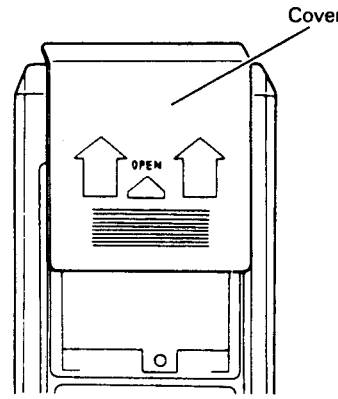
1. Set the LEARN switch of the programmable remote control unit to the USE position.
2. Set the TRANSMIT mode selector switch to the desired position (AUDIO/VIDEO/AUX).
   - Set to the VIDEO position for programming as described in the example.
3. Press the key of the desired function.
   - The TRANSMIT indicator lights up while the remote control unit is sending codes.

NOTE:

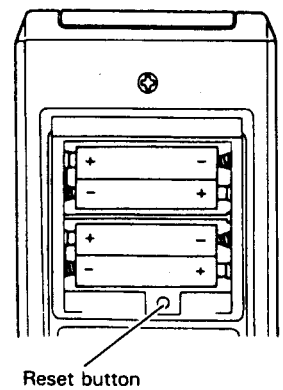
- *When operating programmed keys, always set the LEARN switch to the USE position. Operation is not possible in the LEARN position.*
- *For functions which require two keys to be pressed at the same time (recording etc.) or functions for which several codes are sent simultaneously (auto functions, timer programming, etc.) the programming procedure is different and improper operation may occur.*

Returning to the Initial Settings

1. Set the LEARN selector switch to the LEARN position.
2. Remove the battery cover.



3. Press any of the keys available for programming. The LEARN indicator will illuminate.
4. Use a ball-point pen or similar object to press the RESET button while the LEARN indicator is flashing.



- The programmed functions for the AUDIO, VIDEO and AUX positions are cleared, and the remote control unit is reset to the Pioneer uniform remote control codes.
- Press the button gently; do not use excessive force.

The following is the summary of the remote function modes. It is noteworthy that the unit can learn audio or video type of commands regardless of the setting of the transmit mode. This means you can program audio commands while the mode selector switch is on video and vice versa.

		TRANSMIT MODE SELECTOR SWITCH		
		AUDIO	**VIDEO**	**AUX**
LEARN SELECTOR SWITCH	**SR RECALL**	Operate all audio sections of this receiver and other Pioneer components.	Operate the video sections of this receiver and other Pioneer components.	Operations only the amplifier and surround sections.
	LEARN	Learn commands from different audio brands.	Learn commands from different video brands.	Learn additional audio or video commands.
	USE	Operate audio components of different brands, using the programmed (learnt) commands.	Operate video components of different brands, using the programmed (learnt) commands.	Operate the extra audio-video commands learnt.

HINTS FOR BETTER RECEPTION

OUTDOOR FM ANTENNA

The main advantage of FM over AM is the quality of the broadcast signal. In order to benefit fully from the high signal quality of FM broadcasts, it is recommended that a special-purpose FM antenna be installed. In weak signal areas, a multi-element (3-element, 5-element, 7-element) antenna should be used.

GROUNDING

Grounding is recommended if reception of FM programs is impaired by noise. To ground, connect a thick polyvinyl insulated wire to the GND terminal and attach the other end to a metal water pipe or grounding bar or wind it around a copper plate and bury it.

NOTE:

Never connect a wire to a gas pipe for grounding since sparks may ignite the gas.

EXTERNAL AM ANTENNA

If it is not possible to obtain adequate AM reception even by changing the orientation of the AM loop antenna, a separate indoor antenna, or an outdoor antenna should be installed.

INDOOR AM ANTENNA

Use a vinyl insulated wire (5 – 6 m) and connect one end to the AM antenna terminal and affix the other end to the wall or ceiling, as high as possible.

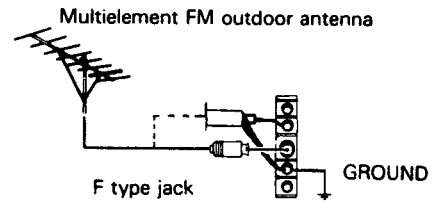
OUTDOOR AM ANTENNA

If reception quality is not improved sufficiently even when an indoor antenna is used, a vinyl insulated wire should be installed outside and fixed in place.

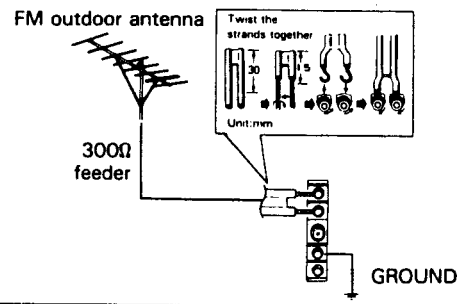
NOTE:

Do not detach the AM loop antenna when using an indoor or an outdoor AM antenna.

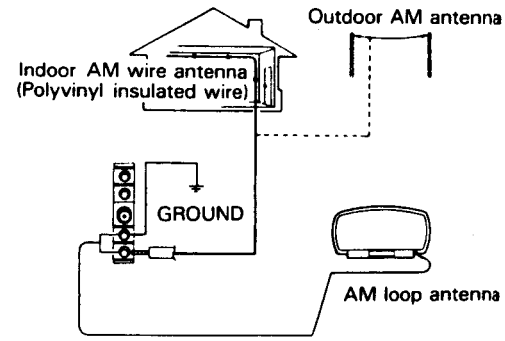
Connecting a coaxial 75Ω cable



Connecting a 300Ω feeder



AM antenna connection



TROUBLESHOOTING

Incorrect operations are often mistaken for trouble and malfunction. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used.
If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest PIONEER authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
Power does not come on even when POWER switch is pressed.	• Power cord is disconnected. • Instances are rare, but the problem may be due to the operation of the protector circuit.	• Connect cord securely. • Unplug the power cord of the unit from the AC wall outlet, then plug it in again.
Control was not possible regardless of what operation switch was pressed.	• Static electricity affected the unit when the air was dry, such as in winter.	• Unplug the power cord of the unit from the AC wall outlet, then plug it in again. • If static electricity is pronounced, it is recommended that you operate the unit using the remote controller.
No sound is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect. • The MUTING switch is pressed. • TAPE 2 MONITOR switch is in the ON position. • SPEAKERS switches are turned OFF. • VOLUME is turned down. • Speaker connecting wires are disconnected from speaker terminals. • One or both of the input cords are disconnected. • Connector bars are disconnected.	• Consult page 7 — 18 and perform connections correctly. • Press the MUTING switch to cancel the MUTING effect. • Press the switch again to the OFF position. • Press the SPEAKERS switch to turn ON. • Raise volume. • Connect wires to terminals securely. • Connect input cords securely. • Connect bars securely.
Rear sound is not produced.	• SURROUND MODE switch is OFF position. • DOLBY 3CH LOGIC is ON during playback. • REAR LEVEL control is minimum.	• Press the SURROUND MODE switch to correct position. • When using DOLBY 3CH LOGIC, there is no sound from the rear channel. • Adjust REAR LEVEL control.
REAR L or R sound is not produced.	• REAR BALANCE is incorrect. • The sound is monaural.	• Press the REAR BALANCE R or L on the remote control unit to correct the balance. • Use the simulated surround mode.
No picture is produced, even when the INPUT SELECTOR switch is selected.	• Connections are incorrect. • The VIDEO SIGNAL SELECTOR is not set properly. • The VCR and the selected INPUT SELECTOR switch are not correct. • Even though a component is connected to the VIDEO ADAPTOR jacks, the VIDEO ADAPTOR switch is in the ON position.	• Consult page 7 — 18 and perform connections correctly. • Set correctly. • Press the correct switch. • Set the VIDEO ADAPTOR switch to the OFF position.
High noise level.	• Station has not been tuned in to correct frequency. • Antenna has not been connected or has become disconnected. **FM reception** • Accessory T-type antenna remains bundled up or it is not pointing in right direction. • Weak broadcasting station signals. **AM reception** • AM loop antenna is not pointing in right direction. • Weak broadcasting station signals. • Noise being picked up from this unit and other equipment (especially electrical appliances using motor or fluorescent lights).	• Tune the station in correctly. • Connect the antenna securely. • Stretch both end of antenna taut and locate direction yielding optimum reception. • Replace accessory T-type antenna with outdoor FM antenna. • Change the AM loop antenna's direction and find a position where reception is improved. • Erect outdoor AM antenna or connect ground wire. • Stop using appliances generating noise or remove them from vicinity of stereo equipment. • Separate the loop antenna from the unit by some distance.
No auto stop.	• Input signals are not strong enough.	• (FM) If the T-type antenna is being used, change to an outdoor antenna.

Symptom	Cause	Remedy
TV source can't be seen when the VCR's TV tuner is used.	• TV antenna is not connected to VCR, or connections are faulty. • You are attempting to watch a TV source using a VCR with copy system connections. In general, when copy system connections are made, the VCR's TV tuner function ceases to operate. For details, consult the operating instructions for your VCR.	• Consult the VCR's operating instructions, and connect antenna correctly. • Disconnect the copy system connection.
Video tape copies can't be made with the VCR.	• Video tape copy connections haven't been made. • INPUT SELECTOR and REC SELECTOR settings are incorrect.	• Look again closely at the section VIDEO SYSTEM CONNECTIONS on page 9, 10 and 15, and connect correctly. • Refer to the explanation of VIDEO RECORDING on page 34.
Remote control does not work.	• Batteries are dead or no batteries in remote control unit. • Poor angle or too great a distance from the remote sensor window. • There is an obstacle between you and the remote sensor window. • LEARN selector switch and/or TRANSMIT mode selector switch position is incorrect. • A fluorescent light is shining on the remote sensor window.	• Insert new batteries. • Use within seven meters and within a 30 degree angle of the remote sensor window. • Change your position or move the obstacle. • Set to correct position. • Move so fluorescent light does not shine directly on amplifier front panel remote sensor window.
Cannot switch MULTI ROOM & SOURCE ON.	• A component has been selected with the REC SELECTOR.	• Switch the REC SELECTOR to SOURCE.
Sound in MULTI ROOM & SOURCE room B is different.	• Room A is in the surround mode.	• Switch surround OFF. • When using surround in room A, for room B, connect the SUB FUNC OUT jacks to a separate amplifier and operate MULTI ROOM & SOURCE.
With MULTI ROOM & SOURCE, there is no sound in room B.	• SPEAKERS B are OFF.	• Switch SPEAKERS B ON.
With MULTI ROOM & SOURCE, remote control of room B volume level is not possible.	• For surround in room A, SUB FUNC OUT jacks are being used.	• Adjust volume on the amplifier connected to the SUB FUNC OUT jacks.

SPECIFICATIONS

Amplifier section

OUTPUT POWER (POWER AMP IN)

MODE A
(Front)

Continuous average power output of 130 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.005 % total harmonic distortion.**

Rear, center ..... 40 W + 40 W, 40 W (1 kHz, 0.08%, 8Ω)

MODE B

Front, center ... 70 W + 70 W, 70 W (20 Hz to 20 kHz, 0.005%, 8Ω)
Rear ..... 50 W + 50 W (1 kHz, 0.08%, 8Ω)
Dynamic power (2 Ω/4 Ω) ..... 280 W/260 W

Audio section

Damping Factor
1 kHz, 8 Ω 100
Input (Sensitivity/Impedance)
PHONO MM ..... 2.5 mV/47 kΩ
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ..... 150 mV/47 kΩ
POWER AMP IN ..... 1 V/47 kΩ
Phono Overload Level (T.H.D. 0.08 %, 1000 Hz)
PHONO MM ..... 150 mV
Output (Level/Impedance)
TAPE 1/DAT REC, TAPE 2 REC, VCR 1 OUT, VCR 2 OUT ..... 150 mV/2.2 kΩ
PRE AMP OUT ..... 1 V/220 Ω
Frequency Response
PHONO MM ..... 20 Hz to 20,000 Hz ± 0.3 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 .... 5 Hz to 100,000 Hz ±3 dB
Tone Control
BASS ..... ±8 dB (100 Hz)
MIDDLE ..... ±8 dB (1 kHz)
TREBLE ..... ±8 dB (10 kHz)
Loudness Contour ..... +6 dB (100 Hz)
+3 dB (10 kHz)
Signal-to-Noise Ratio (IHF, short circuited, A network)
PHONO MM ..... 82 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ..... 98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]
PHONO MM ..... 77 dB
CD, LINE, TAPE 1/DAT, TAPE 2, VIDEO, TV, VDP/CDV, VCR 1, VCR 2, VCR 3 ..... 80 dB

VIDEO Section

Input (Sensitivity/Impedance)
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR ..... 1 Vp-p/75 Ω
Output (Level/Impedance)
VCR 1, VCR 2, ADAPTOR, MONITOR ..... 1 Vp-p/75 Ω
Frequency Responce
VCR 1, VCR 2, VCR 3, VDP/CDV, TV, VIDEO, ADAPTOR→MONITOR ..... 5 Hz – 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB (3.58 MHz)
Enhancer ..... ±3 dB (2 MHz)

[S terminals]

Input (Sensitivity/impedance)
VCR 1, VCR 2, VDP/CDV ..... Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Output (Level/impedance)
VCR 1, VCR 2, TO MONITOR TV. Luminance signal: 1 Vp-p/75 Ω
Color difference signal: 0.286 Vp-p/75 Ω
Frequency response
Luminance signal ..... 5 Hz to 10 MHz, $^{+0}_{-3}$ dB
Signal-to-Noise Ratio
Luminance signal ..... 55 dB
Cross talk ..... 55 dB (3.58 MHz)

Surround section

Input (Sensitivity/Impedance)
REAR POWER AMP IN ..... 1 V/47 kΩ
CENTER POWER AMP IN ..... 1 V/47 kΩ
Output (Level/Impedance)
REAR PRE AMP OUT ..... 1 V/470 Ω
CENTER PRE AMP OUT ..... 1 V/470 Ω

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono; 10.8 dBf, IHF (0.95 μV/75 Ω)
50 dB Quieting Sensitivity ..... Mono; 15.3 dBf, (1.6 μV/75 Ω)
Stereo; 37.0 dBf, (19.5 μV/75 Ω)
Signal-to-Noise Ratio ..... Mono; 80 dB (at 65 dBf)
Stereo; 76 dB (at 85 dBf)
Distortion ..... Mono; 0.08 % (100 Hz)
0.08 % (1 kHz)
0.2 % (6 kHz)
Stereo; 0.2 % (100 Hz)
0.15 % (1 kHz)
0.3 % (6 kHz)
Capture Ratio ..... 1.0 dB
Alternate Channel Selectivity ..... 65 dB (400 kHz)
Stereo Separation ..... 50 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz $^{+0.5}_{-2.0}$ dB
Image Interference Ratio ..... 50 dB
IF Interference Ratio ..... 80 dB
AM Suppression Ratio ..... 55 dB
Spurious Interference Ratio ..... 70 dB
Antenna Input ..... 300 Ω balanced
75 Ω unbalanced

AM Tuner Section

Frequency range ..... When 10 kHz step: 530 kHz – 1,700 kHz
When 9 kHz step: 531 kHz – 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 300 μV/m
Selectivity ..... 30 dB
Signal-to-Noise Ratio ..... 50 dB
Image Interference Ratio ..... 40 dB
Antenna ..... Loop antenna

Miscellaneous

Power requirements
- U.S., Canadian models ..... AC 120V, 60 Hz
- Other destination models ..... AC 110/120–127/220/240V (switchable), 50/60 Hz

Power consumption
- U.S., Canadian models ..... 680 W, 840 VA
- Other destination models ..... 1100 W
- In stand by condition ..... 3 W

AC Outlets
- U.S. and Canadian models... SWITCHED x 2: TOTAL 200 W MAX
  UNSWITCHED x 1: 200 W MAX
- Other destination model.. SWITCHED x 2: TOTAL 100 W MAX
  UNSWITCHED x 1: TOTAL 100 W MAX

Dimensions ..... 420 (W) x 162 (H) x 457 (D) mm
16-9/16 (W) x 6-3/8 (H) x 18 (D) in

Weight (without package) ..... 15.0 kg (33 lb)

Furnished Parts

FM T-type antenna	1
AM Loop antenna	1
Dry cell battery (LR03/AM-4)	4
Remote control unit	1
Operating Instructions	1
Templates added	2

NOTE:
Specifications and the design subject to possible modifications without notice due to improvements.

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier.*
** *Measured by Audio Spectrum Analyzer.*

POWER-CORD CAUTION

Handle the power cord by the plug. Do not pull out the plug by tugging the cord and never touch the power cord when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit, a piece of furniture, etc,. on the power cord, or pinch the cord. Never make a knot in the cord or tie it with other cords. The power cords should be routed such that they are not likely to be stepped on. A damaged power cord can cause fire or give you an electrical shock. Check the power cord once in a while. When you find it damaged, ask your nearest PIONEER authorized service center or your dealer for a replacement.

MAINTENANCE OF EXTERNAL SURFACES

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are very dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleaners.
- Never use thinners, benzine, insecticide sprays and other chemicals on or near this unit, since these will corrode the surfaces.

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